TREATISE

OF THE

FIVE ORDERS

IN

ARCHITECTURE

To which is Annex'd, A

Discourse concerning Pilasters:

And of feveral ABUSES introduc'd into

ARCHITECTURE.

Written in FRENCH

By CLAUDE PERRAULT,

OF THE

ROYAL ACADEMY of PARIS,

And made ENGLISH

By JOHN JAMES of Greenwich.

The SECOND EDITION.

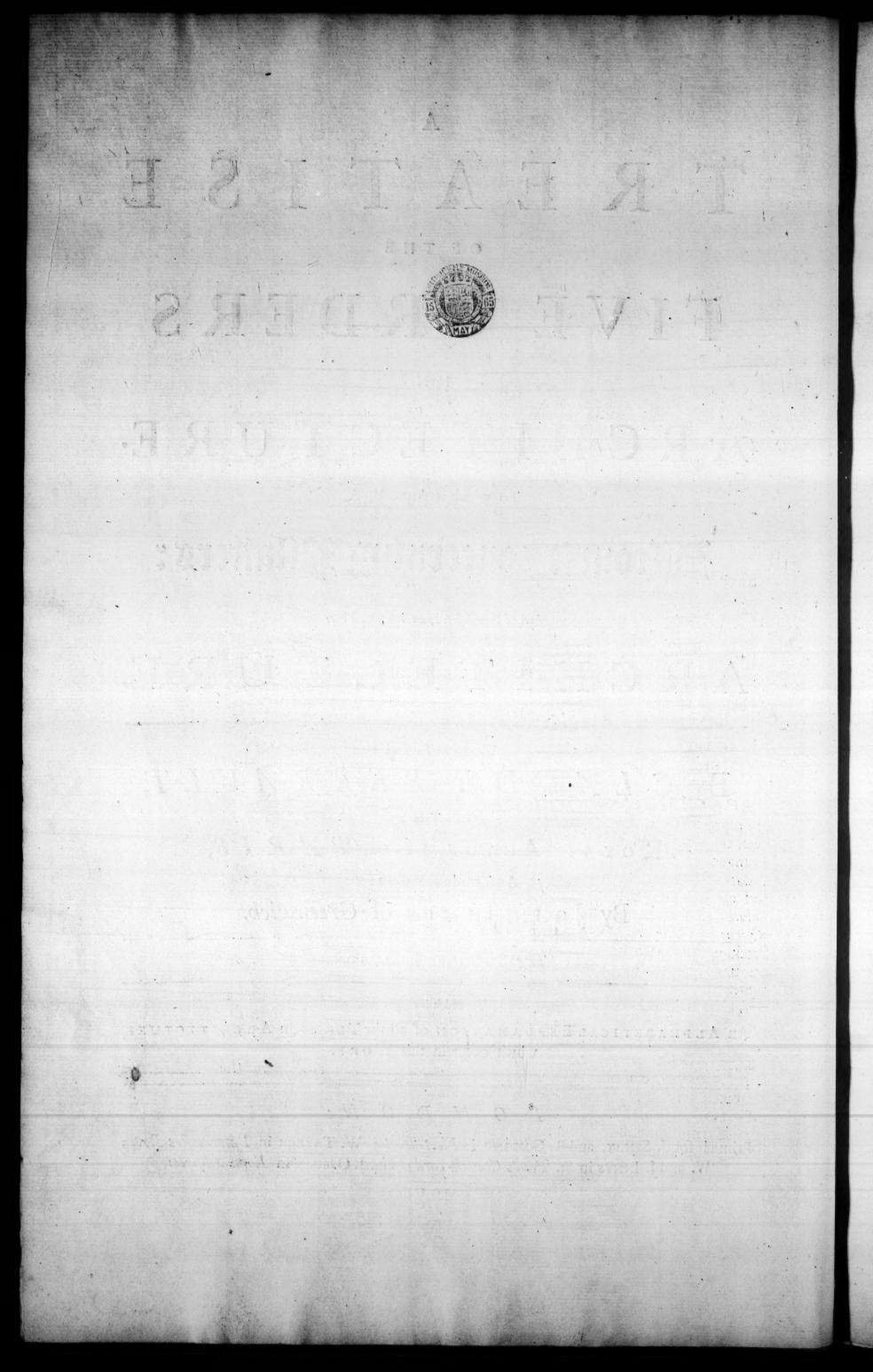
To which is added,

An Alphabetical Explanation of all the Terms in Architecture, which occur in this Work.

L O N D O N:

Printed for J. Senex, and R. Gosling in Fleet-street; W. Taylor in Pater-noster-Row; W. and J. Innys in St. Paul's Church-Tard; and J. Osborn in Lombard-street.

M. DCC. XXII



A TREATISE of the FIVE ORDERS of COLUMNS ARCHITECTURE, Toltan, Dozic, Tomic, Cozinthian and Compolite, The Proportions and Characters of the Members Of their feveral PEDESTALS, COLUMNS and ENTABLATURES, Are distinctly considered, with respect to the Practice of the

Antients and Moderns.

A most Natural Easie and Practicable Method laid down for determining the most minute Part in all the Orders, northout a Fraction. Towhich is Amer'd.

A DIS COURSE concerning PILASTERS:

ABUSES introduc'd into ARCHITECTURE.

Engraven on Six Folio Plates of the feveral Orders, adorn'd with Twenty-Four Borders, as many Initial Letters, and a like number of Tail-Pieces, by

John Sturt.

1505/69

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Written in French by Claude Perrault,

Of the ROYAL ACADEMY of PARIS, Author of y Celebrated COMMENT ON VITRUVIUS.

Made English by John James of Greenwich.



LOND

PRINTED for John Senex, Will. Taylor, Will m and John Innys, and John Ofborn, Bookfellers.

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To the RightHonble

THOMAS

art of Sembroke & Scontgomern,

LORD HERBERT of CAERDIFF &c.

LORD PRESIDENT OF

HER MAjTIES most Hon ble Privy Council:

LORD LIEUTENANT GENERAL

And General Governor of the Kingdom of Ireland,

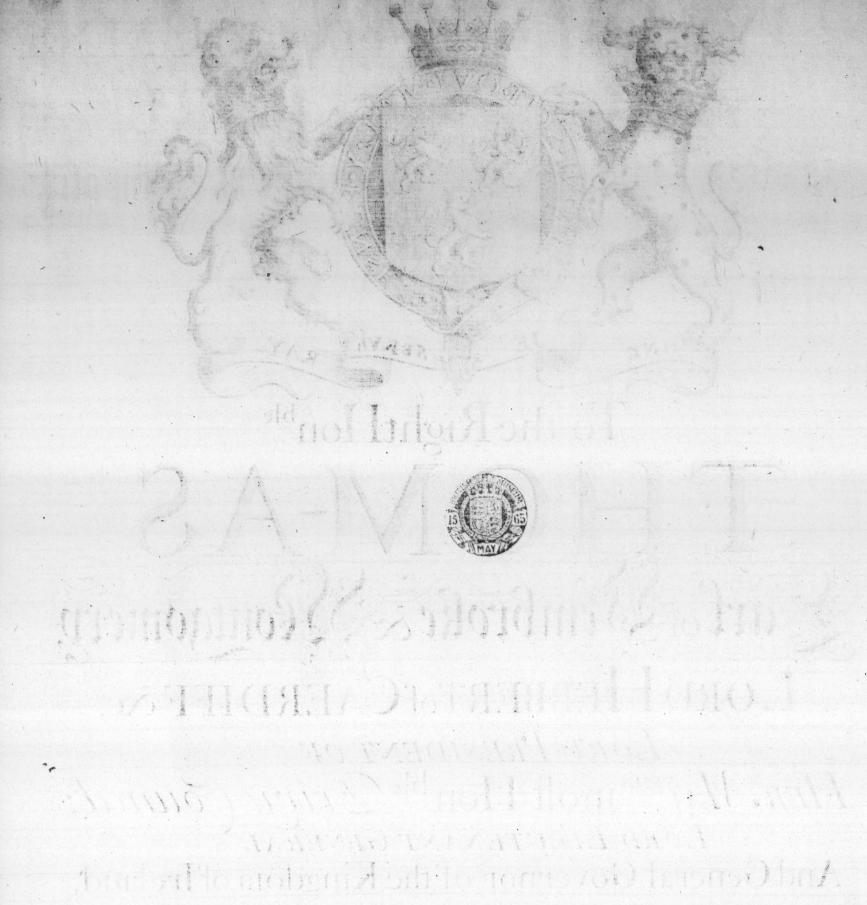
Knight of the most Noble Order of the Garter.

Na grateful Senfe of many FAVOURS received from your LORDSHIP, This Translation is most humbly Dedicated by,

My Lord, Your Lordships

> most humble and Obedient Servant,

> > John James.



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MITLORD, YOUR LORDSHIPS

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To my LORD

Tis, ha Receive Lyou Burt Bur Burt Burt Boll Com

MARQUIS of SEIGNELAY,

BARON of SEAUX, &c.

MINISTER and SECRETARY Of STATE, and of the King's Commands; Commander and Grand Treasurer of His Majesty's Orders; Comptroller General of the Finances; Superintendant and Surveyor General of His Majesty's Buildings and Gardens, and of the Arts and Manufactures of France.

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After having, by your Lordship's Order, translated and explain'd Vitruvius, with a Success ow-

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ing principally to the Judgment your Lordship has given of it, and which I could never have had the Confidence to hope for, had I not relied on that incredible Power which your Lordship's Care and Conduct has to make every thing fucceed you undertake; The BOOK, which I now take the Freedom to present your Lordship, having the same Advantage, in the good Fortune, that its Delign, as bold and extraordinary as it is, has received your Lorship's Approbation, I expose it to the World with the same Confidence. As this is a fort of Supplement to what was not particularly enough treated of by Vitruvius, 'tis probable those, who are curious in the noble Art that Author has taught us, may be pleased with the Novelties this Book contains; and that such as please to put its Rules in Practice, will find them of confiderable Use in making those Things easy and delightful that are wont to give the greatest Trouble. For fully to answer the Intentions your Lordship has, to furnish the Lovers of Architecture, with all possible Means that may render them accomplish'd, and make them capable of contributing, by eternal Monuments, to the Glory of our invincible Monarch, it was not enough to have drawn so many Rarities, contain'd in the excellent Books of Vitruvius, out of almost an impenetrable Obscurity, to have explain'd, from this Author, with greater Clearness than formerly, the Principles and Precepts of the Art of Building, and

DEDICATION.

and the Particulars of those Ancient Wonders of the World that he has describ'd to us: but it was farther requisite to clear that Confusion and Disorder, wherein the Modern Authors have left the greatest part of what belongs to the five Orders of Columns, where we scarce find any certain Rule; Authors all differing concerning the Proportions those beautiful Parts ought to have, which make all the Ornament and Majesty of great Buildings. But my Lord, how difficultly foever the Means by which I propose to confine these Proportions within certain Rules, may be received, by reason of the great Esteem there is deservedly for those of a contrary Opinion to mine, and whose Works being so generally approv'd, seem, in some Measure, to oppose my Design, I am nevertheless perswaded that it will not appear altogether rash and inconsiderate, when the World shall know your Lordship has not disapprov'd it. I mention these Particulars, my Lord, for the Concern I have the Publick should be inform'd, that my Book having need of fuch an Authority as your Lordships, I would not omit to explain this Authority, if the Weight of it could possibly be doubted of, as it might whether I have the Honour of being supported by it. The great Light of that vast Genius, which renders You capable of all Sorts of Knowledge, has shin'd sufficiently to inform the World long fince, that the most fublime Things which usually possess your Mind, do not so wholly fill it, but

DEDICATION.

but that there is room for the less important, and no one can fail of being convinc'd but AR-CHITECTURE, that Queen of the beauteous Arts, has a principal Place among those for which You have the greatest Inclination, if we consider the excellent Works perform'd by your Orders, in so great Numbers, and in so little Time, to the Admiration of the Intelligent, and the utmost Satisfaction of all who paffionately love the Glory of the Great Monarch under whom we live, and of the happy Age we have the good Fortune to be born in. But what more particularly obliges me to inform the World that a Work fo apparently useful was done by Your Lordship's Order, is the Hope I have that the Public, who will receive the Benefit of it, will also assist me to acknowledge part of the Obligation due from me to Your Lordship, for having been pleased to trust me with a Work of this Importance: there being nothing in the World I more ardently desire than to give your Lordship Proofs of that profound Respect with which I am,

My LORD,

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PREFACE.



Twas not without Reason the Ancients thought that the Rules of those Proportions, which make the Beauty of Buildings, were taken from the Proportions of humane Bodies, and that as Nature has given a stronger Make to Bodies sit for Labour, and a slighter to those of Activity and Address; so there are different Rules in the Art of Building, according as a Fabrick may be

design'd massy or more delicate. Now these different Proportions, accompanied with their proper Ornaments, make the Differences of the Orders of Architecture; in which, the most visible Characters which distinguish them, depend on the Ornaments, as the most essential Differences consist in the Proportions that their Parts have in regard of each other.

These Differences of the Orders, taken from their Proportions and Characters, without much exact Punctuality, are the only things that Architecture has well determined: all the rest, which consists in the precise (a) Measures

Measures of the several Members, and a certain Turn of their Figures, has, as yet, no certain Rules in which all Architects agree; each having endeavour'd to give these Parts all possible Perfection, chiefly in what respects the Proportion: so that several, tho' by different Ways, have, in the Opinion of the judicious, had equal Success: Which shews that the Beauty of a Building is so far like that of a humane Body, that it consists not so much in the exactness of one certain Proportion, or Conformity of Size, which the Parts have one with the other, as in the Grace of the Form, which is nothing else but its agreeable Modification, upon which, an excellent and perfect Beauty may be founded, without strictly observing this very kind of Proportion. For as a Face may be handsome, or homely, with one and the same Proportion, since the Change we observe in the Parts, when, for Instance, Laughing lessens the Eyes, and widens the Mouth, is like what we see in the same Face, when it weeps; this very change of Proportion, which pleases in the one, being disagreeable in the other; and on the contrary, two Faces, with different Proportions, may be equally beautiful: So we see in Works of Architecture, very different Proportions, so graceful, as to be equally approv'd of by the judicious, and such as have the true Taste of Architecture.

But as it must be granted, that no one certain Proportion is absolutely required in the Beauty of a Face, it is, notwithstanding, likewise true, there is a Proportion, from which, it cannot vary much, without lofing the Perfection of its Beauty; there are also, in Architecture, Rules of Proportion, not only in the general, such as are those which distinguish the Orders from each other, but likewise in the particular Parts, from which we cannot deviate, without losing much of the Grace and Elegance of the Structure: but in these Proportions, the Architect has a sufficient Latitude to augment or diminish the Dimensions of the Parts, as occasion Shall require. 'Tisby Virtue of this Privilege, that the Ancients have made Works so extraordinary in their Proportions, sach as the Doric and Ionic Cornices of the Theatre of Marcellus, and that of the Frontispiece of Nero, which are half as large again as they ought to be, according to the Rules of Vitruvius: And on the same Account, all those that have wrote of Architecture, vary from each other; fo that we cannot find, either in the remains of the Buildings of the Ancients, or among the great Number of

Architects that have treated of the Proportions of the Orders, that any two Buildings, or any two Authors, agree, and have followed the same Rules.

This shews what Ground there is for the Opinion of those, who imagine that the Proportions, which ought to be observed in Architecture, are certain and invariable, as those are which make the Delicacy and Agreement of Sounds in Musick, which depend not upon us, but are such as Nature has fix'd, and establish'd, with so precise an Exactness, that they cannot be alter'd, without immediate Offence to the least curious Ear: for if it were so, it must needs follow, that those Works of Architecture, which have not these true and natural Proportions, which, 'tis pretended, they are capable of having, would be condemn'd by common Confent, or at least, by those, who, through their great Knowledge and Abilities, are the best Judges in this Affair: And, as we see, Musicians never differ about the Truth of a Consonance, because there is a certain and evident Beauty in the Exactness of it, of which, the Senses are easily, and even necessarily convinced; so would Architects agree in those Rules which would make the Proportions of Architecture perfect; especially after baving sought them with so much Diligence, as 'tis plain they have, in running through, by a vast number of Experiments, all the several Degrees that might give them this Perfection; as is easily evine'd from the Example of the different Projectures which have been given the Doric Capital. For Leon Baptisti Alberti makes this Projecture of no more than two Minutes and a half, sixty of which Minutes are the Diameter of the Column; Scamozzi makes it of five Minutes; and Serlio gives it seven and a half; that of the Theatre of Marcellus has seven and three quarters, and that of Vignola eight; Palladio allows it nine, De Lormeten; and, in the Coliseum, it is seventeen. Thus'tis near two thousand Years, that Architects, assaying and trying, from two and a half to seventeen, have made this Projecture near seven times larger, some than others, without taking Offence at the Extravagance of Proportions, so different from that which they would have pass for the true and natural one, as they must have done, had any of these Proportions been such, and which would necessarily have had the same Effect, as those things which offend or please us, without our knowing wherefore.

Now, the Reason why it can't be said, that the Proportions of Architecture please the Sight on an unknown account, and that, of their own nature, they perform their Effects, as harmonious Sounds produce theirs in the Ear, notwithstanding the Hearer's Ignorance of the reason of their Consonance; is, that the Knowledge which we have, by means of the Ear, of what results from the Proportion of two Strings, wherein the Harmony consists, is quite different from the Knowledge we have, by the Eye, of what arises from the Proportion of the Parts, of which a Column is compos'd; for if the Mind is touch'd by the Interposition of the Ear, with what results from the Proportion of two Strings, without its knowing that Proportion,'tis because the Ear is not capable to transferr this Knowledge; but the Eye, which hath a Capacity of communicating the Knowledge of that Proportion which is pleasing, cannot otherwise make the Mind sensible of any Effect of it, than by the Knowledge it gives of the Proportion it self; from whence it follows, that what is agreeable to the Eye, is not so, on account of its Proportion, when the Eye knows it not, as it very often happens.

To make a just Comparison, then, between Musick and Architecture, we must not consider Consonances, barely in themselves, which are all, naturally such as cannot be chang'd, but the manner of making use of them, which is different by different Musicians, and in divers Nations, like as the Proportions of Architecture are in different Authors and Buildings: for as we know not any one Way of composing Harmony, that is necessarily and infallibly better than another, nor any Reason that can demonstrate the French Musick to excel the Italian, so there can be none found to prove, that a Capital, which has more or less Projecture, Should necessarily and naturally be more beautiful than another; nor is it here as in a simple Consonance, where it may be demonstrated that a String, which has either a little more or less than half the Length of another, makes an intollerable Discord with this other, by Reason the Proportion naturally and necessarily produces such Effect in their Sounds.

There are also other Effects, which Proportion, of it self, naturally produces in Mechanicks, for the Movement of Bodies, which cannot be compar'd to those it produces for the Pleasure and Delight of Sight: for if a certain Length of one Arm of a Balance, in respect to the other, causes

one Weight necessarily and naturally to outweigh the other, it does not thence follow, that a certain Proportion, which the Parts of a Building have in regard of each other, must produce a Beauty that has such effect upon the Mind, as to force it, (if I may so speak) and oblige it to an Approbation, as the Proportion of the Arm of a Ballance, makes it infallibly go down on that Side where the Arm is longest. This however, is what most Architects say, when they would have us believe that what makes the Beauty, as for Instance, of the Pantheon, is the Proportion, which the Thickness of the Walls has with the Vacuity of the Temple, that of its Breadth with its Height, and a hundred other Things, which are not discernable without Measuring, and by which, when perceived, we can no ways be assured that they might not as well have been otherwise, without being disagreeable.

I should not insift so much on this Question, tho' is a Point whose Resolution is of the greatest Importance to my present Design, being well assured, that those who will give themselves the Trouble to examine, will soon find the Opinion I espouse, has no great need of other Reasons than those I have produced; were it not that most Architects hold the contrary: For that shews we ought not to look upon this Problem as unworthy our Examination; since if Reason appears on one Side, the Authority of Architects, which is on the other, ought to ballance the Matter, and keep it in suspence, tho' I confess, Architecture would not otherwise be concerned in this Dispute, were it not for some particular Works and Examples taken from thence, which serve to evince, that there are many Things, which, tho' contrary to Reason and good Sence, fail not to please; but all Architects agree in the Truth of these Instances.

Now, although we often like Proportions that are conformable to the Rules of Architecture, without knowing why we affect them, it may, however, be truly said, that we ought to have some Reason for this Love, and the Difficulty is only to know whether this Reason be always something that is positive, as is that of the Consonance of Musick, or whether it is not most commonly sounded upon Custom only; and whether that which renders the Proportions of a Building agreeable, be not the same thing with that which makes a modish Habit please on account of its Proportions, which neverthless have nothing positively beautiful, and that ought to be lov'd for itself; since when Custom, and other Reasons not positive, which induc'd this Love, come to change, we affect them no longer, tho'they remain the same.

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To judge rightly in this case, we must suppose two sorts of Beauties in Architecture, namely those that are founded on solid convincing Reasons and those that depend only on Preposession and Prejudice; by Beauties founded on convincing Reasons; Iunderstand such as cause Buildings to please every one, because their Worth and Value are easy to be known, such as are the Richness of the Materials, the Grandeur and Magnificence of the Structure, the Exactness and Neatness of the Performance, and the Symmetry, which denotes that kind of Proportion, which produces an evident and remarkable Beauty: for there are two forts of Proportions, whereof one, which is difficult to be perceiv'd, consists in the relative Conformity of the proportional Parts, such as the Dimensions of the Parts in respect of each other, or of the whole. The other Proportion, which we call Symmetry, and which consists in that Correspondence the Parts have one with another, on account of the equality, and Parity of their Number, their Magnitude, their Situation, and their Order, is a thing very obvious, and the Effects thereof such as we can never fail of discovering, as is evident from the Inside of the Pantheon, where the Compartment of the Vault, baving no Respect to the Windows beneath, causes a Disproportion, and want of Symmetry easie to be observ'd by any one, and which, had it been corrected, would have produc'd a more visible Beauty than what proceeds from the Proportion which the Thickness of the Walls bear to the Vacuity of the Inside of the Temple, or from the other Proportions found in this Stru-Eture, as that of the Portico, which has, in breadth, three fifths of the Diameter of the whole Temple, from out to out.

Now to these kinds of Beauties, which I call Positive and Convincing, I oppose those I call Arbitrary, because they depend upon the Will we have to give such a certain Proportion, Form and Figure to Things, which might have another without Desormity, and which are not agreeable, for Reasons of which, every one is a Judge, but only through Custom, and a Connexion which the Mind makes of two Things of a different Nature, for by this Connexion, it comes to pass, that the Esteem, wherewith the Mind is preposses d, for some things whose Value it knows, infinuates an Esteem, also, for others, whose Worth it knows not, and insensibly engages it to respect them like. This Principle is the natural Foundation of Belief, which is nothing else but an Esteet of that Prepossession, by which the Knowledge and

good Opinion we have of him who assures us of anything whose Truth we are ignorant of, disposes us to make no Doubt of it. 'Tis this Prepossession, also, that makes us like Things in the Mode, and the Ways of Speaking us'd at Court: for the Regard we have for the Merit and good Graces of the Court, makes us love even their Dress and manner of Speech, though these Things have nothing in them positively amiable, and some short time after they become disagreeable, without having undergone any Change in themselves.

Thus it is in Architecture, there are Things which Custom only renders so agreeable, that we cannot bear to have them otherwise, tho' they have no Beauty in themselves, that must infallibly please, and necessarily demand Approbation, such as is the Proportion which Capitals generally have with their Columns: and there are even some Things, which Reason and good Sense would render desorm'd and disagreeable, that Custom has made tolerable, such as the Situation of Modillions in Pedaments, that of Dentels under the Modillions, the richness of Ornaments in the Doric Cornice, the plainness of the Ionic, the Position of Columns, which stood not plum in the Porches of the Temples of the Ancients, but inclining towards the Wall. For all these things, which ought to give Distaste, as being contrary to Reason and good Sense, were first born with, because join'd with positive Beauties; and at length became agreeable by Custom, which has even had such Insluence on those who may be said to have had the Taste of Architecture, that they have not been able to permit they should be otherwise.

To know how many Rules there are in Architecture for Things which please, although contrary to Reason; we ought to consider that the Reasons which should chiefly regulate the Beauty of Architecture, ought to be sounded, either upon the Imitation of Nature, such as is the Correspondence of the Parts of a Column with its whole; like as there is between the entire Body of a Man, and all its Parts, or upon the Resemblance that a Fabrick may have with the first Buildings, that Nature taught Men; or upon the Likeness that the Quarter-rounds, Ogees, Astragals, and other Members have to the Things from whence the Figures of those Mouldings are taken; or, lastly, upon the Imitation of what is done in particular Arts, as in Carpentry, whence are derived the Freezes, Architraves, and Cornices, with their several Members, as Modillions and Mutules. Nevertheless' tis not

upon these Imitations and Resemblances, that the Grace and Beauty of all these Things depends; for if it were so, their greatest Beauty would consist in the most exact Imitation. Now we do not find that the Proportions and Figure, which all these Things ought to have to make 'em agreeable, and which cannot be chang'd, without giving Distaste, are taken exactly from the Proportions and Figure of the Things they represent and imitate. For it is certain that the Capital, which is the Head of that Body, the whole Column represents, has not the Proportion which the Head ought to have to a Body, since the more squat the Body is, the fewer times doth it contain the Length of the Head, and on the contrary, the thickest Columns have the lowest Capitals, and the slenderest have the highest in Proportion to the whole Column. In the same manner, those Columns are generally dislik'd, which nearest resemble the Bodies of Trees, which were the Posts of the first Huts that were built; and we commonly chuse to have them swelling in the middle, which is never seen in the Trunks of Trees, for they are gradually tapering to the Top. Nor would Cornices give greater Satisfaction, did their Members more exactly represent the Figure and Disposition of the Pieces of Carpentry, from whence they were first devis'd: for then the Dentels ought to be above the Modillions, which in Cornices, at the Eaves, represent the Ends of the Rafters; and the Modillions, which, in the Cornices of Pediments, express the Ends of Purlins, ought to lye square to the sloping Line of the Pediment, as the Purlins do to the Declivity of the Roof, and not perpendicular to the Entablature, as is generally practis'd; and lastly, were the Quarter-rounds to bear a greater Likeness to Chesnuts in their prickly Shell, the Ogees to the Waves of a River, and the Astragals to a Heel, they would be never the better relist'd by the judicious. Twere also requisite, did Reason alone direct our Judgment, that the Ionic Cornices should be richer and more adorn'd than the Doric; it being but just, that a more delicate Order should have more Ornaments than that which is more massive; and in fine, we should never be able to suffer, as they did formerly, the Columns to be set leaning of one side, had not Custom made tolerable a Thing in itself so contrary to Reason.

Neither the Imitation of Nature, nor Reason, nor good Sense, are then the Foundation of those Beauties, which we fancy we see in the Proportion, Order, and Disposition of the Parts of a Column; and it is impossible to assign

any other Cause of their Agreeableness, than Custom. So that those who first invented these Proportions, having scarce any other Rule than their Fancy, according as that has chang'd, new Proportions have been introduced, which likewise please in their turn. Thus the Proportion of the Corinthian Capital, which was counted be autiful by the Greeks, was not approved of by the Romans, the former allowing only the Diameter of the Column for its Height, and the latter having added a fixth part more. I know very well, it may be said, that when the Romans encreas'd the Height of this Capital, they did it with Reason, for that it makes room to give the Stalks and Volutes a more agreeable turn than could be done, where the Capital was Short and wide. And'tis on this account that the Capitals of the great Columns, of the Front of the Louvre, are made even higher than those of the Pantheon, after the Example of Michael Ange-10, who in the Capitol, at Rome, has made them still higher than they are at the Louvre. But this only shews, that the Taste of those Architects, who have approv'd, or do fill approve the Proportion, which the Greeks gave their Corinthian Capitals, ought to be charg'd upon some other Principle than that of a Beauty, positive, convincing, and amiable in itself, existing in the thing as such, that is, as having this very Proportion; and that it is difficult to find any other Reason for this Esteem, than Custom and Prepossession. I confess, indeed, this Prepossession, as was faid before, is founded on an infinite number of Beauties, convincing, positive and rational, which meeting together in Work with this Proportion, have been able to render it so graceful, tho' the Proportion contributed nothing to its Beauty, that the just Esteem Men have had for the entire Work, has made them likewise singly respect all the Parts which compose it.

Thus it fell out in the first Works of Architecture, where the Richness of the Materials, the Grandeur, the Magnificence and Delicacy of the Workmanship, the Symmetry, that is, the Equality and just Correspondence which the Parts have each to other, in keeping the same Order and Situation, the good Judgment in things capable of it, and where other evident Reasons of Beauty were found, the Structures appear dso beautiful, and gain'd such Admiration and Esteem, that they were judy dfit to be the Rule and Pattern of others, and as it was believ'd impossible to add to or alter any thing in all these positive Beauties, without impairing those of the whole Work: so they could not imagine, but that the Proportions, which might really have been

THO PREFACE.

otherwise, without prejudice to the other Graces, would have produc'd an ill Effect, had they been alter'd. Just as when a man is passionately in love with a Face, the it has nothing perfectly beautiful but the Complexion, yet he cannot help thinking the Proportion too, so agreeable, that he knows not how to believe, any Change thereof could render it more charming: for a smuch as the great Beauty of a Part making him love the whole, the love of the whole necessarily includes that of all the Parts.

know very well, it may be faid, that when the Komans encreased the Eleight Tis certain, then, that there are some Beauties in Architecture, which are positive, and some that are only arbitrary, tho' they seem positive through prejudice, from which it is very difficult to guardour selves. 'Tis also true, that a good judgment is founded on the Knowledge of both these Beauties; but it is certain, that the Knowledge of arbitrary Beauties, is most proper to form what we call a right Tast, and 'tis that only which distinguishes true Architects from those that are not so; because common Sense alone is sufficient for knowing the greatest part of positive Beauties; nor is there any great difficulty in judging that a large Fabrick of Marble, wrought with great Nicety and Exactness, is handsomer than a small Building of roughhewinStones, where there is nothing exactly level, square, or perpendicular. It requires no very great Ability in Architecture, to know that the Court of a House ought not to be less than the Chambers, that the Cellars should not be lighter than the Staircases, and that Columns ought not to be thicker than their Pedestals. But good Sense can never inform us, that the Bases of Columns ought to have in Height, neither more nor less, than half the Diameter of the Column; that the Modillions and Dentels, in Pedaments Should be perpendicular to the Horizon; that the Dentels ought to be under the Modillions; that the Triglyphs should have in Breadth half the Diameter of the Column, and that the Metopes should be precisely square.

It is also easy to conceive that all these things might have had other Proportions, without Offence to the most exquisite and delicate Sense; and that it is not here, as in the Constitution of our Bodies, which, when disorder'd, may be dangerous, tho the sick person knows not the degrees of those Qualities which make it so: for to be displeas'd or pleas'd with the Proportions of Architecture, we must be instructed by a long Observation of the Rules, which Use alone has established, and of which, good Sense could never have given us the least Knowledge: as in the Civil Laws, there are

Some

Some which depend on the Will of the Legislators, and the Confent of the People, which the natural Light of Equity does not discover to us.

If, then, true Architects, in considering Works of different Proportions, as was said before, approve only of those that are in a Mean between the two Excesses in the Examples before cited, it doth not follow, from thence, that these Excesses offend a judicious Eye, on account of any Deformity, that, for a natural and positive Reason, must necessarily displease every one, as being contrary to good Sense; but only as not being according to that Manner which has us'd to please in the beautiful Works of the Ancients, where these excessive Proportions are not ordinarily encountred; and where even this Manner is not pleasing so much in itself, as because it is accompanied with other positive, natural and rational Beauties, which, if I may so speak, make it lov'd for company.

But because this Manner, consisting in a Mean, equally distant from the Extremes, observable in the propos'd Examples, has not only a Latitude, not precisely determin'd in these different Works, which, for the most part, are equally approv'd; but has likewise no reason in it that should require so very nice and precise an Exactness to make it agreeable; and that by consequence, properly speaking, Architecture has no Proportions true in themselves; it remains to be examin'd, if we can establish those that are probable and likely, sounded upon positive Reasons, without departing too far from the Proportions usually received.

of Architecture, have treated of this Subject two Ways: Some have only collected from the Ancient and Modern Works, the most illustrious and approved Examples; and as these Works contain different Rules, they have contented themselves with proposing all, and comparing them together, without determining scarce anything as to the Choice we ought to make. Others have thought that in this Diversity of Opinious of Architects, concerning the Proportions which ought to be observed in the several Members of each Order, it might be permitted them to give their Judgments on those Opinions which had all Authors, so great, that they could not establish a bad Choice: and they have even made no Scruple to propose their own private Sentiments, as a Rule: For we may say, that Palladio,

Palladio, Vignola, Scamozzi, and most of the other samous Architects have done thus, who have neither been careful, punctually to sollow the Ancients, nor to conform to the Moderns.

The Design of these latter is nevertheless commendable, in that they have endeavour'd to establish certain and determin'd Rules, to which, Recourse might always be had for every thing capable of such Decision. But it were to be wish'd, either that some one amongst them had had an Authority Sufficient to make Such Laws as Should have been inviolably observ'd; or that such Rules could be found out, that had in themselves Truth so evident, or at least, such Probabilities and Reasons as might make them preferable to all others, that have been propos'd; that one way or other there might be something fix'd, constant, and establish'd in Architecture, at least in regard to the Proportions of the five Orders, which would not be very difficult: for these Proportions relate to things which need no Study, Search, or Discovery to be made of them, asthere does of what concerns the Strength and Conveniency of Buildings, where there is certainly room for a great many new and very considerable Improvements; neither are they of the Nature of those Proportions, requisite in the Works of Military Architecture, and in the making all Sorts of Machines, where the Proportions are of the greatest Importance.

For 'tis certain it signifies little to the Beauty of a Building, whether in the Ionic Order, for instance, the Height of the Dentel, in the Cornice, be precisely equal to the second Face of the Architrave; or whether the Rose in the Corinthian Capital, descends lower than the Abacus; or whether the Volutes, in the Middle, rise just as high as the Rim of the Vase of the Capital: for altho' these Proportions were observed by the Ancients, and prescrib'd by Vitruvius, the Moderns have not followed them; and there can be no other Cause assign'd for it, than that these Proportions are not founded upon necessary and positive Reasons, as they are in many other Things, as in Fortifications and Machines, where a Line of Defence, for Example, cannot be longer than the reach of the Artillery, nor one Arm of a pair of Scales shorter than the other, without rendering these things absolutely useless and desective.

For this Reason, we may consider the two Manners of treating of the Proportions of the sive Orders, practis'd and receiv'd at present, as not being

the only ones that may be made use of, and that there is nothing ought to binder the receiving of a third. To make this plain by a Comparison I have already us'd, and which is very natural to the Subject I am now speaking to, (wherein the third Manner consists) I say, we may imagine that those who follow the first Manner, do just as if in prescribing the Proportions of a beautiful Face, they should give exactly those of Helena, Andromache, Lucretia, or Faustina; in which, for Example, the Forehead, the Nose, and the Space from the Nose to the Extremity of the Chin, were equal within a few Minutes, yet differently in each of these Faces: And that the Architects, who follow the second Manner, do like those, who, giving the Proportions of a beautiful Face, Should allow nineteen Minutes and a half, from the Root of the Hair to the beginning of the Nose; twenty Minutes and three quarters, from the beginning of the Nose to its End, and nineteen Minutes and three quarters, from the Extremity of the Nose to that of the Chin: and lastly, the third Manner is to make these three Spaces equal, by giving each twenty Minutes.

Thus, to apply this Comparison to Architecture, if it should be demanded, according to the first Method, what ought to be the Proportion, for Instance, of the Height of the whole Architrave, in respect of the Freeze; the Answer would be, That in the Temple of Fortuna Virilis, in the Theatre of Marcellus, and almost generally, they are equal within few Minutes; the Freeze being a small matter the higher, in some of these Fabricks, and the Architrave in others. If we consult the second Method, we shall find that those who lay down Rules for the Proportions we speak of, do not vary much from this Equality, but their Measures are somewhat different from those of the Ancients, and some make them equal in one Order, and not in another. But in following the third Method, we shall always make them equal in the Ionic, Corinthian and Composite.

Now it is very obvious, that this third Manner is at least more easy and convenient than the others, since if it is true, that the one hundred and twentieth Part of the whole Face added to, or taken from the Forehead, Nose, or Chin, doth not make the Face more or less agreeable; it is likewise as true, that nothing is more easy than to find, imprint and retain in memory, the Proportion it ought to have. So that if we cannot say this Proportion is precisely the true one, since a Face may have all the agreeableness possible, without this very Proportion, and may be disagreeable with it, yet it ought,

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at least, to be esteem'd the most likely, since it is sounded upon a positive Reason, which is the Regularity of the Division of the Whole, into three equal Parts. This Method is that which the Ancients follow'd, and that Vitruvius made use of, in the Explanation of the Proportions he has given, where he always proceeds by methodical Divisions, easy to be retain'd; and this Way was left off by the Moderns, for no other Reason, but because they found they could not accomodate it to the irregular Measures that are in the Members of the noble Remains of Antiquity, which are found very different from what Vitruvius hath left us: so that they would have been oblig'd to alter them, in some measure, to reduce them to the regular Proportions, which this Method requires: and yet the greatest part of Architects are persuaded that these Works would have lost all their Beauty, if one Minute only had been taken from, or added to, any of the Members, other than what the admirable Artists of Antiquity assign'd them.

For 'tis hardly to be imagin'd what a superstitious Reverence Architects have for those Works we call Antique, in which, they admire every thing, but principally the Mystery of their Proportions, which they are pleas' dto contemplate with a prosound Respect, without daring so much as to undertake an Inquiry into the Reasons, why the Dimensions of a Moulding were not a little lesser or greater; which is a Thing, we may well presume, was unknown, even to those that made them. This would not be so strange, were we assured that the Proportions, we see in these Works, were not alter'd, and somewhat different from those which the first Inventors of Architecture establish'd; or were we of the Opinion of Villalpandus, who pretends that God, by a particular Inspiration, taught all these Proportions to the Architects of Solomon's Temple, and that the Greeks, whom we esteem the Inventors, learn'd them only, from these Architects.

It is true, however, that this excessive Respect, Architects have for the Antique, which is common to them with the most part of those that make Prosession of humane Science, whose Opinion is, that there is nothing made now, comparable with those of the Ancients, takes it Rise, as unreasonable as it is, from that true Respect which is due to holy things. It is well known, that the Barbarity of the latter Ages, in the cruel War made upon all the Sciences, which totally extirpated them, Theology only excepted, was the Reason that what little Learning remain'd having taken Sanctuary in

the Cloifters, ingenious and inquisitive Persons, were oblig'd to search those Places for the Subject of all curious Knowledge, as well of Antiquity as of Nature, and there exercise themselves in the Art of Reasoning and Informing their Judgment. But this Art, which, in its own Nature, is equally proper for all the Sciences, not having been us'd, during so long a time, by any but Divines, whose Sentiments are entirely captivated and subjected to ancient Decisions, had so lost the Habit of using that Liberty, which is necessary in curious Researches, that several Ages were past before we were able to reason in humane Sciences, otherwise than is done in Divinity. And this was the Reason why formerly the Learned had no other Aim in their Studies, than to find out the Opinion of the Ancients, accounting it far greater Honour to have found the true Sence of a Text of Aristotle, than to have discover'd the Truth of the Thing treated of in that Text.

This Spirit of Submission in the Manner of learning and treating of the Sciences and Arts, is so nurs'dup, and fortified, by the natural Docility of Men of Letters, that'tis very difficult to lay it aside; and we can hardly accustom ourselves to make that Distinction, which there is, between the Respect due to Things sacred, and to those that are not so; which we may be permitted to examine, criticize upon, and censure with modesty, when we endeavour to find out the Truth; and in which, we contemplate no Mysteries, of like Nature with those that Religion proposes to us, and which we wonder not, in the least, to find incomprehensible.

As Architecture, as well as Painting and Sculpture, has been often handled by Men of Letters, so it has been govern'd by this Humour more than the other Arts; they have taken all their Arguments from Authority, imagining that the Authors of the admirable Works of Antiquity, did nothing but for good Reasons, though we cannot find them out.

But those who will not allow that the Reasons which cause those beautiful Works to be admir'd, are incomprehensible, after having examin'd all that belongs to this Subject, and been instructed by the most able Persons; will be convinc'd, if they consult good Sense, that'tis no great Absurdity to think that those Things, for which no Reason can be found, are really without any that contributes to their Beauty, and that they haveno other Foundation than Chance, and the Humour of the Workmen, who fought for no Reason to guide

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guide them in the Determination of those things, the Preciseness of which, was of no Importance.

I know very well, that, notwithstanding all I can say, this Proposition will hardly go down, but will pass for a Paradox that may probably meet with much Opposition, and that even from some well-meaning Persons, who sincerely believe that the Glory of Antiquity lies at Stake, which they are fond of having reputed infallible, and inimitable, possibly because they have never sufficiently studied the Point, and many others may think themselves concern'd, who know very well what they do, when they make use of this blind Respect for the Works of Antiquity, to conceal the Desire they have, that the things of their Profession should seem to have Mysteries, of which, they themselves are the only Expositors.

But as my Intention is not, even though I should prove and demonstrate this Paradox, to make any other Advantage of it, than to get leave to change some Proportions, which differ from the Antique in Things only inconsiderable, and of small Importance; I hope it will not be taken amiss, especially having declar'd that I admire and respect the Works of the Antique Architecture, as they really deserve, and if I speak of them differently from others, my Design is only to obviate some Objections, which the too scrupulous Admirers of past Ages may make to me, upon the Inconvenience they find in not following, in every thing, the Examples of these great Masters, and upon the Danger I expose my self to, of not being credited in what I propose new.

For those that do not intend to wrangle, nor make an ill Use of the Authority of Antiquity, will not employ its Power in things needless, as the Bigness of an Astragal, the height of a Corona, or the exact Dimensions of a Dentel; the Preciseness of these Proportions not being that which makes the Beauty of the Antique, nor the Change of them, of an Importance comparable to that of having the Proportions truly adjusted, in all the Members, of which the Orders are composed, for the establishing an easie and convenient Method.

As to the Success of my Design, if it does not take, I shall not be much concern'd at the Missortune, being the same that has befallen the most illustrious

strious persons, since neither Hermogenes, Callimachus, Philo, Clesiphon, Metagenes, Vitruvius, Palladio nor Scamozzi, with all their great Ability, could obtain such Approbation as to have their Precepts receiv'd for Rules of the Proportions of Architecture. If it be objected that the Method I propose, Should it even be approved, was not any thing difficult to be found out; that I make little or no Alteration in the Proportions; and that there is scarce any of them but what is found in some of the Works of the Ancients and Moderns; I freely own I have invented no new Proportions: but this is my Satisfaction, that I have no other Design, in this Work, than to Shew, that, without Offence to the Idea Architects have of the Proportions of each Member, they may be reduc'd to Measures easily commensurable, with I call probable, there being a great Reason to think. that the first Inventors of the Proportions of each Order, did not make them such as we find in the Antique, where they only come near these Measures easily commensurable; but that they made them actually just, and that, for Instance, they gave not the Corinthian Column nine Diameters and an half; sixteen Minutes and an half, as it is in the Porch of the Pantheon; nor ten Diameters eleven Minutes, as it is in the three Columns of the Forum Romanum: but that they made them exactly sometimes nine Diameters and an half, sometimes ten; and that the Negligence of the Workmen of the Antique Remains, is the only real Cause of the Defect in these Proportions that they are not exactly according to the true ones, which, it's reasonable to believe were establish'd by the first Inventors of Architesture.

I do not see what can be said against this Opinion, because I neither know, nor believe it possible for any one to discover, the Reasons which induced Architects to use broken and difficult Proportions, without any Necessity, and to affect the changing of the Ancient ones, which were easie, consisting of entire Numbers. Why, for Example, the Ancients, before Vitruvius, having always given to the Plinth of the Attic Base, the third of the whole Base, the Architect of the Theatre of Marcellus, should add one Minute and a quarter to this third, which is of ten Minutes; and why, the Ancients having always made the Doric Architrave equal to the Semidiameter of the Column, the Architect of the Baths of Diocletian, should think fit to add a fifth Part more, and Scamozzia sixth, and in fine, upon what mysterious Account it is, that, in the Porch of the Pantheon, there are scarcely found two Columns of the same Diameter. Nor do I believe it possible to

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guess why Scamozzi has assign'd in his Ordonance of Architecture, Proportions so intricate, that 'tis not only difficult to remember, but even to comprehend them.

I may say then, that if the Changes of Proportions, which the Architects, since Vitruvius, have introduc'd, are without any Reason, that is known to us, I have cause to think, those, which I propose, will appear to be founded upon clear and evident Reasons, such as the Easiness of making and remembring the Divisions: and that what I add new, is not so much to correct the Antique as to endeavour to re-establish it in its pristine Persection, which I do not pretend to do by my own Authority, nor by any Knowledge peculiar to my self, but always grounding my Semiments on some Examples taken from the Antique Works, or from approv'd Writers; and rarely making use of Reasons and Conjectures, which Privilege, however, I think should not be denied me, in regard I propose them with an entire Submission to the judicious, who will be at the Pains to examine them.

For after all, my Opinion is, that if the Works we have of the Antique, are like the Books from whence we must learn the Proportions of Archite-Eture, these Works are not the Originals made by the first and real Authors, but only Copies differing from one another, and of which some are faithful and correct, in one thing, and some in another: so that, in Archite-Eture, to restore the true Sense of the Text, if I may so speak, it's necessary to search these different Copies, which being approved Works, must each contain something correct and faithful, the Choice of which ought manifestly to be sounded upon the Regularity of Divisions, not broken without Reason, but easie and commodious, as they are in Vitruvius.

For as to any Doubt that may be made, whether the Works of the Antique are defective Copies, and different from the first Originals, as to Proportions, I believe that is sufficiently made out to be just and allowable, by the Reasons and Conjectures throughout this Preface, wherein I have endeavour'd to prove that the Beauty of the Antique Works, as admirable as it is, is not sufficient to make us conclude, that the true Proportions were observed in them, having shewn that the Beauty of Structures does not consist in the Exactness of these true Proportions, since 'tis plain, something may be omitted without impairing the Beauty of the Work; and 'tis possible, that were these

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these true Proportions observed, it might not be more agreeable if destitute of other Parts, in which, the real Beauty consists; such as, amongst other things, are the Manner of describing agreeably the Out-lines and Prosils, and the Art of disputing with Judgment, all the Parts that make the Characters of the several Orders: which is, as has been said, the second Part, which being join'd with Proportion, comprehends all that belongs to the Beauty of Architecture.

After having explain'd in general, the Reasons that may authorize the Liberty I have taken to propose some Change in the Proportions of the Orders, and reserving for the following Treatise, the Particulars of each Alteration; it remains, that I give the Reasons why I change something likewise in the Characters which distinguish the Orders; which is still a greater Licence than that which touches Proportions, because this Change is most easily discover'd, the Eye alone, without Rule or Compasses, being capable of perceiving it.

Those that are of Opinion there is no Reason can justifie any Change of those Rules, which they suppose were established by the Ancients, may also take the Liberty to deride my Arguments, and censure the Rashness of my Design: but I make no Appeal to such, there being no disputing with those that deny Principles; and I hold it for one of the chief in Architecture, as well as in all other Arts, that none of them being brought to the highest Perfection, there is cause to think, that, if that be unattainable, we may, at least, approach nearer to it by diligent Search; and those who believe it not impossible, ought rather to pretend to it than those that are persuaded of the contrary.

The Orders of Architecture are employed in two sorts of Works, either in Structures built actually for Service, such as Churches, Palaces, and other publick and private Buildings, which require Ornaments and Magnificence; or in historical Representations, where there is need of Architecture, such as are made in Painting, Sculpture, or in the Machines of Theatres, Entries of Princes, Balls and Carrousels. In Performances of this latter Sort, 'tis certain the Ancient Architecture ought punctually to be followed in all its particular Circumstances, and that for Instance, in the Representation of the Story of Theseus, or of Pericles, if the Doric

Order

Order to be made use of, the Columns should have no Bases; if the Ionic, the great Torus ought to be on the uppermost part of the Base, and if the Corinthian be employed, the Capital ought to be squat, the Abacus sharp at the Horns, and the Cornice without Modillions. But when we design an Order for a Building, now to be erected, I do not think so scrupulous an Imitation of the Antique to be necessary, and as we could not approve the Design of an Artist, who, in writing the Words of a Medal of the King, or an Inscription dated in sixteen hundred eighty three, should use the same Characters we see on the Antique Roman Medals, which are different, and have nothing of the Beauty of the Roman Characters, now so much improved and in use; so I think we ought not to blame an Architect who curiously observes and follows the Changes which the most skilful in his Art have introduced with Reason and Judgment, and even with Approbation.

There are none of those who have wrote of the Orders of Architecture, that have not added and corrected something in what they pretend the Ancients established, as Rules and Laws inviolable: and these Writers, who, except Vitruvius, are all Moderns, have followed the Examples of the Ancients themselves, who, instead of Books, have left us Works of Architecture, in which every one has put somewhat of his own Invention: Now these Novelties have been always considered as the Effect of that Pains and Study, which Persons of an inventive Genius have taken for completing those things which the Ancients left with some Imperfection: for the some of these Innovations have not met with Approbation; there are, nevertheless, so great a number received and sollowed, even in things very considerable, as plainly shew, that Alterations of this kind, are, in themselves, not only no rash undertaking, but even, that a Change for the better, is no such difficult thing, as the passionate Admirers of Antiquity would make us believe.

The Bases we call Ionic, which were the only ones in use, amongst the Ancients, for all the Orders that had Bases, were so generally dislik'd by the Architects that came after Vitruvius, that they scarcely ever made use of them. The Ionic Capital has been sound inconvenient and disagreeable by a Change of Taste so universal, that there is no Room to doubt but the Dislike of it has some Foundation in Reason. The Ionic Capital, which Scamozzi has substituted of his own Invention, instead of the Antique,

has not only been so well received, that, at present, scarce any other is made to this Order; but our Architects, since Scamozzi, have introduced Alterations in this Capital, which have brought it much nearer Perfection, as shall be explained in its proper Place. The same may be said of the Composite Capital, which is no other than the Corinthian Capital corrected and redressed: for that too has lately received the Perfection it wanted, not only in the Antique, but also in all the Modern Authors who have treated of the Orders.

Imay, then, have reason to hope, that my Design, in this Work, which, to many, may seem somewhat too daring, will not appear altogether so rash an Undertaking, to those who consider that I propose nothing which has not illustrious Examples and Authors. If any one, for this Reason, pretend to say that my Book contains nothing new, since the Changes, as well in the Proportions, as in the Characters of the Orders, have been practis'd in all times; I readily grant it, and declare, that my Aim is only to extend this Change a little further than has been hitherto done; to see if, by attempting to perswade those of more Knowledge and a greater Genius, than I have, to endeavour the good Success of a Design so we full and reasonable, I might be the cause of giving the Rules of Architecture, that Preciseness, Persection, and Easiness to be remembred, which they wanted.

This Work is divided into two Parts: In the first, I lay down the general Rules of the Proportions common to all the Orders, such as are those of the Entablatures, the Heights of Columns, Pedestals, &c. Shewing that these Measures are either equal, as in the Height of all the Entablatures, or that they go increasing by equal Proportions: In the second Part, I determine the Size and particular Characters of the Members, of which, the Columns, in all the Orders, are composed; which I do by the Examples I produce, both of Antique Works, and Modern Writers. Now, the the Truth of what I mention of the Antique, be a Thing more difficult to be proved, than what I have taken from the Moderns, the Book which Mons. Desgodets has lately printed of the Ancient Buildings of Rome, will be a great Assistance to such Readers as are curious to be instructed in these things, as it was very serviceable to me in finding precisely the different Proportions, which that Architect has taken with the greatest Exactness.

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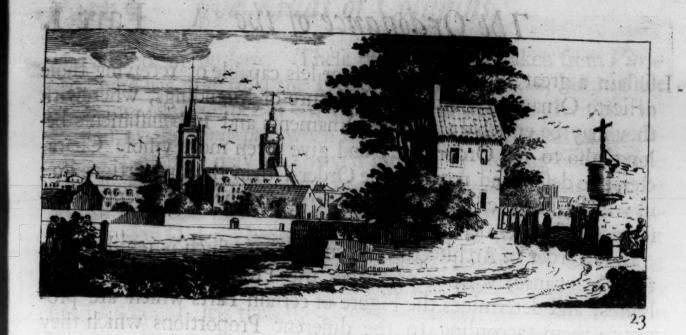
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THE

ORDONANCE

Of the FIVE KINDS of

COLUMNS,

AFTER THE

METHOD of the ANCIENTS.
PART I.

Of Things common to all the ORDERS.

CHAP. I.

What Ordonance, and an Order of Architecture is.



RDONANCE, according to Vitruvius, is that which regulates the Size of all the Parts of a Building, with respect to their Use. Now, by the Parts of a Building, are understood, not only the Pieces, of which it is composed, such as a Court, a Vestible, or a Hall; but also those which go to the Construction of each of them, such as intire Columns,

in which are comprehended the Pedestal, the Column, and the Entablature, consisting of the Architrave, Freeze, and Cornice, which are all I treat of here, and of which, Ordonance directs the Proportions, giving each, Dimensions proper to the Uses for which they are design'd; as that of being more or less strong, and sit to A suffain

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CHAP. I. sustain a great Weight, or more or less capable of receiving those delicate Ornaments, either of Sculpture or Mouldings, wherewith they may be enrich'd: for the Ornaments and Imbellishments belong also to the Ordonance; and give even more visible Characters, to defign and regulate the Orders, than the Proportions do; in which, however, according to Vitruvius, the most essential Dif-

ferences of the Orders confift.

AN Order of Architecture, then, is that which is regulated by the Ordonance, when it prescribes the Proportions of intire Columns, and determines the Figure of certain Parts which are proper to them, according to the different Proportions which they The Proportions of Columns, take their Differences from their Heights, greater or lefler, compar'd to their Thickness; and the Form of the particular Members, proper to their Proportion, takes its Differences from the Plainnels, or Richnels, of the Ornaments of their Capitals, of their Bases, of their Flutings, and of the Modillions, or Mutules, which are in their Cornices.

THUS, in the three Orders of the Ancients, which are the Doric, Ionic, and Corinthian; the Doric, which is the most massy, has, in all its Parts, a Groffnels and Plainnels, that diftinguishes it from the others: for its Capital has neither Volutes, nor Leaves, nor Stalks: the Base, when it has one, is compos'd of very thick Tores, without Aftragals, and with only one Scotia; its Flutings are flat, and fewer in number than in the other Orders, and its Mutules are no more than a plain Block, without any Scroul or Foliage. On the contrary, the Corintbian has, in its Capital, feveral delicate Ornaments, which Sculpture bestows on it, cutting two Rows of Leaves, from which, proceed Stems or Stalks cover'd by Volutes: its Base is inrich'd with two Affragals, and a double Scotia: its Modilhons are delicately carv'd in Scrouls, adorn'd with Leaves, like those of the Capital. The Ornaments, of the Ionic Order, hold a Mean between the Extremes of the two others; its Base having no Torus next the Plinth, its Capital no Leaves, and its Cornice only Dentals instead of Modillions.

THE Moderns have added to the three Orders of the Ancients, two others, whole Ordonance they have regulated, in proportion to that of the Ancient Orders, for they have made one which they call the Tuscan, more gross and plain even than the Doric, and one call'd the Composite, which they have made more compounded than the Corinthian, its Capital being made up of that of the Corinthian, whence it has its Leaves, and of that of the lonic, of which it has borrow'd the Volutes, as we may fay, that the Corintbian is compos'd of the Ionic, whence it has the two Scotias, and the Alfragals, in its Base, and of the Doric, having, in its Capital, a Neck or Vase,

which is not in the *Ionic*. These two Orders are taken from *Vitruvius*, who has prescrib'd the Proportions of the *Tuscan*, but has not put it into the Number of the Orders; and who has given the Invention of the *Composite*, when he says that the Capital of the *Corinthian* Column, may be chang'd into it, by making one, whose Parts should be taken from the *Ionic* and *Corinthian* Capitals: but he says further, that this Change of the Capital, ought not to establish a new Order, because the Proportion of the Column is not chang'd; this Capital being of the same Height with that of the *Corinthian*, which makes an Order different from the *Ionic*, by reason its Capital, less than the *Corinthian*, renders the whole Column shorter. By which, we may perceive, that, according to *Vitruvius*, the Proportion is more essential to determine the Orders, than are the particular Characters of the Figure of their Parts.

OR determining the Meatures, which make the Proportions of the Meatures, which make the Proportions of the Members, which which, confifs the principal Dine rence of the Orders; Architecta have made the of two Ways. The inft is, that they take a fix'd and certain Mental that they take a fix'd and certain Mental that they take a fix'd and certain Mental that they want to be a fixed as a fix'd and certain Mental that they want to be a fixed as a fix'd and certain Mental that they want to be a fixed as a

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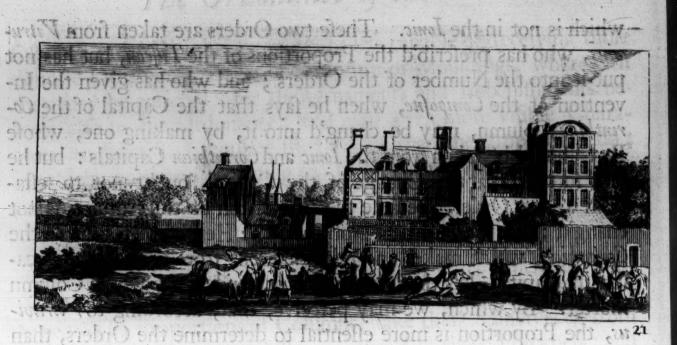
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are the particular Characters of the Figure of their Parts.

Of the Measure which is to regulate the Proportions of the Orders.



OR determining the Measures, which make the Proportions of the Members, whereof Columns are compos'd, and in which, confifts the principal Difference of the Orders; Architects have made use of two Ways. The first is, that they take a fix'd and certain Meafure which is either mean, or very small, they use the Mean, which is the Diame-

ter of the lower Part of the Column, call'd a Module, when they would regulate such Measures, as much exceed that of the Diameter or Module; as for example, in taking eight or nine Diameters for the Height of the Column, and two, three or four, for the Intercolumnation. The smallest Measure, which is call'd a Part or Minute, which is usually the fixtieth Part of the Module, is made use of to determine those Measures that are less than the Module: as in giving ten Minutes to the Plinth of the Attic Base, seven and a half to the greater Torus, five to the lesser, Gc.

In the fecond Method, there is no use made of Minutes nor of other certain and stated Portions of the Module, but the Module, or other Measures, determin'd by the Module or other wise, is divided into as many equal Parts as isnecessary: thus the Height of the

Attic Base, which is the half the Module, is divided either into three, to have the Height of the Plinth, or into sour, for that of the greater Torus, or into six for that of the lesser.

BOTH these Manners have been practis'd, as well by the Antient as Modern Atchitects: but the second, which the Ancients generally used, is, in my Opinion, preferable to the other, not so much for that it always supposes the Relation, which the whole has to its Parts; for I do not think that any thing arises from thence, that can affect the Eye with Delight, there being nothing properly, but the Agreement of Order, or Equality, that can be pleafing to the Sight, because, other Proportions are not alike obvious to it. But that which I think the Method of the Ancients the better for, is the Help it affords the Memory to retain the Measures, because it is founded upon a Reason, capable of producing what we call Remembrance, whose Effect is much more certain than that of the bare Apprehension of the Memory. For, when we once know that the third Part of the Attic Base is the Height of its Plinth, the fourth Part that of its under Torus, and the fixth Part that of the other Torus, 'tis almost impossible to forget the Proportions of this Base; But it is not so of the ten, seven and a half, and five Minutes, which are the Measures of the Parts of this Base; by reason the Proportions, that these Numbers have one to the other, are no otherwise known, and easie to be retain'd in Memory, than because ten is the third Part, seven and a half the fourth, and sive the fixth Part of thirty Minutes, which is the Height of the whole Base.

What has oblig'd the Moderns always to make use of the same Minutes, is the Necessity, they often had, to denote Measures that hold no Porportion, either with the Measure of the intire Module, or that of the other Parts; as when the Plinth of the Attic Base, instead of ten Minutes has but nine and a half, or when it has ten and a half: and thus they were oblig'd to do, because they only propos'd to give the Measures of the Works that remain of the Ancients, which, probably, not being the true Originals, had not that just Preciseness of Proportions, which the first Inventers gave them, there not being any Appearance of Reason, why they should come so near a just Division, without making it exact.

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As I intend not, in this Work, to lay down the Proportions, otherwise than by Measures, which have all relation each to other, and to come, as near as possible, to the true ones established by the Ancients; I shall use no other than their Manner of Measuring. As Vitruvius, then, in the Doric Order, has lessen'd the Module, which, in the other Orders, is the Diameter of the lower Part of the Column, and has reduc'd this great Module to a mean one, which

Chap. I which is the Half-Diameter; I here reduce the Module to the third Part for the same Reason Vitruvius had, namely, the Conveniency of determining thereby several Measures without a Fraction; for in the Doric Order, besides that the Height of the Base, as in the other Orders, is determin'd by one of these mean Modules; the same Module gives likewise the Heights of the Capital, Architrave, Triglyphs, and Metops. But our little Module, taken from the third of the Diameter of the lower Part of the Column, has Uses much more extensive; for by this, the Heights of Pedestals, of Columns, and of Entablatures, in all the Orders, are determin'd without a Fraction.

As then, the great Module, which is the Diameter of the Column, has fixty Minutes, and the mean Module thirty, our little Module has twenty; so that the great Module contains three little ones; the mean Module one and a half, two great Modules make fix little ones, two mean ones make three, or as may be seen in

the following Table.

The Table of the Modules.

Great Module.	Min.	Mean Module	. Min	Little Module.	Min-
I. contains	60	be send a 101	39	Transfer of the second	30 40
ht of the whol	Heis	which is till	60	Ministration of the Ministration	60
de of the feet	120	Leveralive .III	90	IV.	80
e in it. Module	120	the Mar.VI	120	VI.	100
or enditoring	180	v. a bon said	150	VII.	130
III.		t the World	180	VIII.	150
roods ayag madi irroo balan sa	Invel hv t	hickete uv	210	X. orne period to	190
IV.	240	VIII.	dieut.	XI. XII.	210
teritori di sen di vd. 15 di del		IX. 1961 of		XIII.	240
V.	300	X. (2010)	270	XIV.	270
lover Pirt e		A.	300	XV.	300

WHAT isufually call'd a Part, which is the thirtieth Part of the Semi-diameter of the Column, shall, in this Treatise, be always call'd a Minuet, to avoid any doubt, which the Name of Part might occasion, because it fignifies here, not a certain Part, such as the Name of Minute implies; but a Quota, that is to fay a Third, a Fifth, &c. of another Part.



in the Columns, So that the Twices Policital, which is equi

So likewite the Columns, with their Bale and Capital,

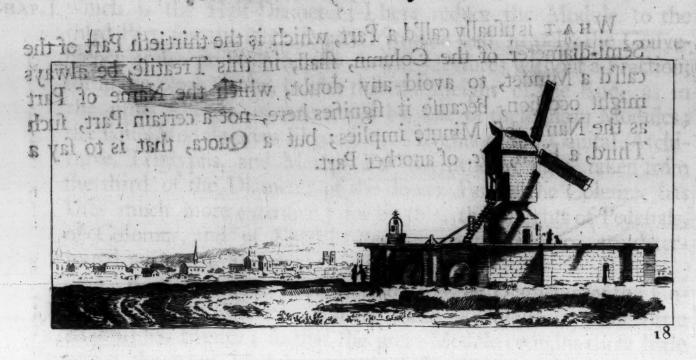
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Contains nine, and the Composite ten.

their Augustuanon, as danid before,

that the Japans, having twenty-two Modules, the

The Ordonance of the Part. I.



CHAP. III.

Of the general Proportion of the three principal Parts of entire Columns.



H E entire Columns, in every Order, are compos'd of three principal Parts, which are the Pedestal, the Column, and the Entablature. Each of these Parts is again compos'd of three others: The Pedestal having its Base, its Die or Trunc, and its Cornice. The Column has its Base, its Shaft, and its Capital: And the Entablature consists of the Archi-

trave, Freeze and Cornice. The Heights of these three principal entire Parts, are determin'd by a certain Number of the little Modules; for as the Entablatures, in all the Orders, are always equal according to my Supposition, each has six little Modules, which make two Diameters, or great Modules. But the Height of the Pedestal, being different in each Order, as well as that of the Column, these Parts always go increasing by equal Proportions, according as the Orders are lighter, and less massive. This Augmentation is constantly of one Module, in the Pedestals; and of two in the Columns, So that the Tuscan Pedestal, which is equal to its Entablature, has six Modules, the Doric seven, the Ionic eight, the Corintbian nine, and the Composite ten.

So likewise the Columns, with their Base and Capital, having their Augmentation, as I said before, of two Modules, it follows that the Tuscan, having twenty-two Modules, the Doric has twenty-

four

four, the Ionic twenty-fix, the Corintbian twenty-eight, and the Com-

polite thirty.

LASTLY, the Proportions of the three Parts, which compose the Pedestals, are also equal in all the Orders, for the Base is always the fourth Part of the Pedestal, and the Cornice the eighth Part; the Socle, or Plinth of the Base, has always two Thirds of the Base itself, and thence it follows, that the Height of the Die, is what remains of the whole Height of the Pedestal, which is already determin'd.

THE Column has likewise its Base of the same Height, in all the Orders: namely, of one Module and a half, which is half the Diameter of the lower Part of the Column. The Capitals are also of the same Height in the Tuscan, and in the Doric Order, being equal to that of the Base. In the Corintbian and Composite, it is likewife equal, being three Modules and a half. The lonic, only, has

a Proportion, which is particular to it felf.

THE Heights of the Parts of the Entablatures, have their Proportions less regular: what they have in common, is, that in all the Orders, except the Doric, the Entablatures have the Architrave and Freeze, both of the same Height, these Parts being each of fix Twentieths of the whole Entablature, and the Cornice of eight Twentieths; but as for the Doric Order, that has necessarily its Proportions by it felf, which are regulated by the Triglyps and Incknels of the ColgoraM

As to the Breadths, or Projectures, they are determin'd by Parts of the little Module, divided into five; so that, for Example, the Diminution of the Columns, is always one of these Fifths, the Projecture of the Cincture, at the Bottom of the Column, is also one Fifth, taken from the Naked of the lower Part of the Column; the Projecture of the Base is three of these Fifths, and so of the

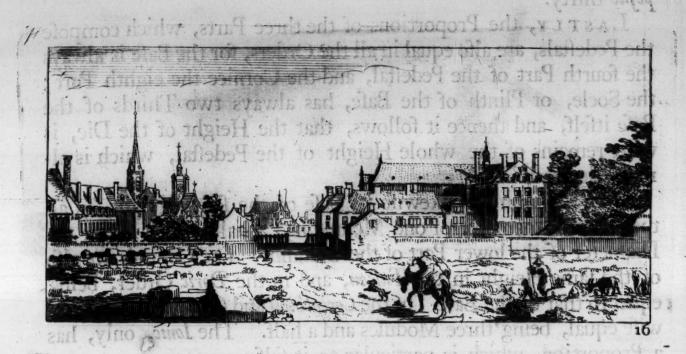
Now this fifth Part contains four Minutes.

THE Explication, and Proof, of all these Proportions, will appear in the following Chapters. Detect is more enly to be new

than any other. It'll's certain, that among the Rules of chure, the policipal are there that appearainto Solidity or Strongth; and that there is nothing, which more definors the Beauty of Building, than, when, in the Parts which compole it, we find Proportions contrary to what ought to chablish this Solidity, as when the Parts appear not capable to militain what they bear, nor to be born by that which fulfains them! Now this is principally remarkable in untablacures and Columns, the Thicknels of Columns, being that which renders them capable of bearing, as the Height of Eurabla-C. TAAHO operation'd to this I hickness; is what renders, and makes

them appear capable of being fulfain'd. Whence it follows that

four, the latar twenty-fix, the Coverbian twenty-eight, and the Con-



CHAP. IV.

Of the Height of Entablatures.



HERE is nothing in which Architects are less agreed, than in the Proportion of the Heights of Entablatures, with respect to the Thickness of the Columns: for there is scarce any Work, either of the Ancients or Moderns, where this Proportion is not different; there being some Entablements near twice as high as others, as is manifest by the Entablature

of Nero's Frontispiece, compar'd with that of the Temple of Vesta near Tivoli.

This Proportion, however, ought, of all others, to be best regulated, none being of greater Importance, nor more shocking when it is unreasonable; because its Desect is more easy to be perceived than any other. 'Tis certain, that among the Rules of Architecture, the principal are those that appertain to Solidity or Strength; and that there is nothing, which more destroys the Beauty of a Building, than, when, in the Parts which compose it, we find Proportions contrary to what ought to establish this Solidity, as when the Parts appear not capable to sustain what they bear, nor to be born by that which sustains them. Now this is principally remarkable in Entablatures and Columns, the Thickness of Columns, being that which renders them capable of bearing, as the Height of Entablatures, proportion'd to this Thickness, is what renders, and makes them appear capable of being sustain'd. Whence it follows that

Height of Entablatures ought to be govern'd by the Thickness of the Columns; and that if it were necessary, there should be some Diversity in the Entablatures of the different Orders, where Columns, of an equal Thickness, are some longer than others, the least Height ought to be given to those Entablatures where the Columns are longest, by reason, the Length of a Column, both renders it weaker, and makes it appear so. Nevertheless, we find the contrary practic'd by the Architects of Antique Structures, where the Entablatures are much higher, in proportion to the Thickness of the Column, in the Orders where the Columns are longest, as in the Corintbian and Composite, than in the Doric and Ionic where

they are shorter.

Part I.

In the three Sorts of Architecture, which are the Antient, taught us by Virtuvius the Antique which we study in the Works of the Romans, and the Modern, of which Books have been writ within these fix-score Years; we find that Vitruvius, and the greatest Part of the Moderns, have, in regard to the Proportions of Entablatures, held an Excels, quite oppolite to the Architects of the Antique, who have made Entablatures of a Size that feem utterly insupportable, fuch as thole of the Frontispiece of Nero, and the three Columns of the Forum Romanum, commonly called Campo Vaccino; the Moderns again, having made them too mean and pittiful, fuch as Bullant and De Lorme have form'd from the Precepts of Vitruvius which are not half so large as those of the Antique. So that it seems, that the Romans, who were the Authors of the Antique, finding the Entablatures of the Antient Architecture, propos'd by Vitruvius to be too small, intending to correct this Defect, fell into the contrary, and possibly as bad an Extreme: and that some of the Moderns, perceiving this Excess, went back again to the Ancient Manner; whereas, they ought rather to have approv'd of the Defign the Romans had to redress the Fault of the Ancients, and have contented themielves with condemning only their Excels.

Some, inquiring into the Cause of this great Diversity of the Height of Entablatures, have told us that the different Size of Buildings, and the Nature of the Orders, which are some more, some less massive, might occasion this Change of Proportion, especially, since Vitruvius has given Rules, according to which, a Column of twenty-five Feet, ought to have its Architraye a twelsth Part higher than a Column of sisteen. But 'tis evident, that Architects have had no regard to this Reason, since they have made Entablatures to little Columns, larger, in proportion, than to great ones; as may be seen in the Pantheon, where the Columns of the Altars, are but a fourth Part as big as those of the Portico, and yet have their Entablatures much larger in proportion. Nor have they better

observ'd

CHAP. IV observ'd the Proportion of the Orders, fince the more massive, such as the Infoamand Doric, which on that account, ought to have their Entablatures greater, have them less, in proportion, than the Corinthian and Composite.

I shall not pretend to make my self Judge of a Difference between so great Persons, and if I deliver my Opinion upon this Head, and on the rest of the Proportions, which we find to have been practic'd; I defire my Judgment may pass for no other than what the Lawyers call Judicium Rusticum, which is given, where the Cause is so perplex'd, that the most discerning Judges cannot penetrate into the Merits of it, but decide the Business by dividing the Thing contended for into Halves. For I think, fince there is nothing that declares the Reason of this great Diversity, we can no other way establish a certain Rule with any Probability, than by keeping a Medium, taking a Measure that has some Relation to that of the Column, fuch as is the Double of its Diameter, which is also equally distant from the Extremes we find in the Works of the Antique.

For if any one should object to me, that there are Authors and Works, where the Measures are less than what I propose, I would oppose other Authors and Works as Authentick, where they are larger. Let it, therefore, be remembred for the future, that 'tis for this Reason, I always take for the Rule and Measure of the Parts, that which is the Mean, and as near as may be equally distant from the Extremes, which we find in the Authentick Examples I produce; not thinking my felf oblig'd to the Preciseness of a few Minutes, when I am endeavouring to reduce the Measures to their

just Proportions, and to whole and unbroken Numbers.

THE following Table has five Columns, for the five Orders, in each of which I fet down the Number of Minutes, that the Entablatures, whose Examples I bring, have more or less than the fixscore Minutes, which contains the two Diameters, or fix little Modules, which I give to all the Entablatures. For this makes it evident that if there are some Entablatures less than what I propose, as are that of the Temple of the Sybil, which is less by twenty-one Minutes, that of Vignola, which is less by thirty, and that of Bullant, which is less by thirty-seven; there are, also, others larger, as that of the three Columns of the Forum Romanum, which has thirty-fix Minutes more, and that of the Colifeum, which has twenty-fix. to little Columns, larger, in proportion, that to extat one

inary be from in the Postkers, where the Columns of the Al

but a fourth Part as big as those of the Portice, and yet have their

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Part I. five Kindo of Communication

The TABLE of ENTABLEMENTS.

Tuscan.		Doric.		Ioni	Ionic.		Corinthian.			Composite.				
	M	in.		M	in	12/2011	M	in.		M	in.		M	in.
Vitruvius	15		Coliseum	26	mo	T. cf F.V.	18		T. of Peace	8	Total Control	A. of Lions	34	me
Scamozzi	11		Scamozzi	27	re.	Vignola ,	18	Da	P. of Sept.	12		Serlio	30	
Vignola	15	lefs	Vitruvius	15		The of M.	25	e.	De Lorme	19	mo	Vignola	30	
Palladio	16		Bullant	15		Coliseum	26	4	M. of Ner.	24	re.	Sept. Arch	19	
Serlio	3		Serlio	13		Palladio	11		3 Columns	36		Titus Arch	19	16
			Palladio	12	le	Serlio	13	ta al	Fr. of Nero	47		T. of Bacc.	2	Ieis.
			Vignola	10	is.	Scamozzi	15	lef	Scamozzi	0		Palladio	0	
2			Barbaro	8	73	De Lorme	16	S.	Palladio	6		Scamozzi	3	
			Th. of M.	7	7.49	Vitruvius	19		Vignola	12	lei	g onen		
			De Lorme	5		Bullant	37	H	Serlio	14	is.			
			e e e e e	Tim		Abadalas	80		Vitruvius	19	-	Time is a		
		1	. 2.777	1176	10	D 10 0:	199	3.	T. ac Subil	Q		A LECTUR		1

It also appears, by this Table, that the Tuscan is the only Order to which Authors have given less than the two Diameters I allow it: and I believe no good Reason can be given why it should be so, since the Doric has sometimes an Entablature greater than the Ionic, Scamozzi having given that, even twenty-seven Minutes more than the hundred and twenty; and the greatest Entablement we find in the Ionic, being that of the Theatre of Marcellus, exceeds the hundred and twenty Minutes but by twenty-sive. And it were more reasonable to give a greater Entablature to the Tuscan, than to the Doric Order, on account of the Thickness and Strength of the Tuscan Column, arising from its Shortness, in proportion to its Thickness, as has been already said.



each



CHAP. V.

Of the Length of Columns.



T is no less difficult to give a Reason for the Diversity of the Lengths, which Architects have given to Columns of the same Order, than for the Difference of the Heights of their Entablatures in the several Orders. Vitruvius makes the Doric Columns of Temples shorter than those of the Porches behind Theatres, without giving any other Reason than

that they ought to have more Majesty in Temples than any where else. Palladio, who seems to have practic'd the same thing, in giving a greater Height to Columns which stand on Pedestals, than to those which have none, has done it still with less Reason: for it seems altogether needless to lengthen Columns, whose Pedestals are already a fort of lengthening. Serlio, who makes his Column a Third shorter when it stands detach'd, than when it does not, has taken a Liberty he has no Precedent for; and the Reasons he gives, why such a Column should be stronger than another, are good, but he misapplies them: for since we may remedy the Weakness of insulate or detach'd Columns, by placing them nearer together, I can't see why we should have recourse to the Change of Proportions, without some greater Necessity.

Notwithstanding the great Diversity of Length that Columns have in the same Orders, according to different Authors, they still have a like Proportion in the several Orders, compar'd

each with other, by which they go increasing according as the Orders are less massive: But this Augmentation is greater in some Ordonances than in others. For in the Antique, it is but of five Modules, or Semi-diameters, for the five Orders; the shortest Column, which is the Tuscan, having sifteen Modules, and the longest, which is the Composite, having twenty. In Vitruvius, this Increase is also of sive Modules, but it rises from sourteen Modules to nineteen. The Moderns have made it greater, for in Scamozzi, it is sive Modules and a half; Palladio and Serlio make it six, as is visible by the following Table, where it should be observed, that the Particulars I give of the Measures, which different Architects have allow'd their Columns, is, from thence, to draw one that shall be a Mean between the Extremes of one and the other, as I have

already done in regard to the Heights of Entablatures.

THUS I suppose the Height of the Tuscan Column ought to be about fifteen Modules, and I give it fourteen and two Thirds, which is twenty-two of my little Modules, because this Measure is a Mean between the fourteen of the Tuscan of Vitruvius, and the sixteen of Trajan's Columns. I likewise suppose the Height of the Doric Column ought to be fixteen Modules, which make twenty-four of my little Modules; because this Length is a Mean between the fourteen of Vitruvius, and the nineteen of the Colifeum. I give also seventeen Modules, and a third to the Ionic Column, which are twenty-fix little Modules, this being a Mean between the fixteen of Sterlio, and the nineteen of the Colifeum. The Corintbian Column has likewife eighteen Modules and two Thirds, which make twenty-eight little Modules, this Length being a Mean between the fixteen Modules fixteen Minutes, of the Temple of the Sibyl, and the twenty Modules fix Minutes, of the three Columns of the Forum Romanum. The Composite Column, by the same Rule, has twenty common Modules, which amount to thirty little ones; this Height being a Mean between the twenty of the Arch of Titus, and the nineteen and an half of the Temple of Bacchus.

The TABLE of Lengths of Columns, drive done

a Dellattad	ade english of ade ad	ofers.	The mean Measure.					
oral Adah	Mean.	Modules	Mean Modules	Little Modul				
2000	Vitruvius	14	is the Conz	doide 3				
down no	Trajan's Column	16	lio of five l	creale is				
Tuscan.	Palladio Managari Shara Sy	14	The Mon	nintreen				
	Scamozzi 15		s b 4 3	22				
dryed, de	Serlio	12	ne in howing	Tiple by t				
Architest	Vignola	14	or criss is the	e Purnoulli				
The state of	to mark or concil mort.	e de la company	rio Passilla	Wollsey				
resiles,	Vitruvius in Temples	14	between the	nselve be				
	Vitruvius in Portic of Temples	15	bing), ms	ready don				
Doric.	The Colifeum	19	16	24				
dids, were	The Theatre of Marcellus	15 =		inalin hio				
	Scamozzi	17	1711 VIII 10 O	A1- (3002 W1				
O SECULOVIEL ON	Vignola	16	0.1025011101	ID ECCI. CO				
	The Colifeum	Sant I	a a summu. Setwil od otl	niomann				
	The Theatre of Marcellus	an I in	rollined : as	ubol/fold				
Ionic.	Palladio .	d le ma	17 -	26				
ty-fixiles	Serlio Serlio	A sile is	dr ou baldin	ban zeh				
no lan ed	Vitruvins	d mon	pagalad sin	t calibbo				
evytie ctori	The Porch of the Pantheon	19:06		do nastas Labara				
	The Temple of Vesta	19:09		alisom m odelas, di mavima ma				
ringu	The Temple of the Sibyl		od 10 majana 10 mili. Srintana					
Romanus	The Temple of Peace	16: 16						
notam	The three Columns in the C. V.	19:02	riira de la de					
naise of			a difference color	28				
Corintbian.	The Temple of Faustina The Basslic of Antoninus	19	18 =					
	The Porch of Septimins	20	m E vi to	Had na L				
	The Arch of Constantine	19:08						
	The Colifeum	17:07						
	Vitruvius	17: 17						
	Serlio	18						
		10						
	The Arch of Titus	20		1)				
Composite	The Temple of Bacchus	19 1	20	30				
Composite.	Scamozzi	19 ;						
	The Arch of Septimins	19:09						

IF it be objected that in the Antique, and in some of the Modern Architects, we do not find that this progressive Augmentation of the Heights of Columns, has been observ'd in the Composite Order, as it has been in the others, and that the Composite and Corintbian Columns, are fometimes of the fame Height, as appears by the Examples in the Table: I answer, that the Distinction of the Orders, principally depending on the Proportion which is between the Length and Thickness of the Column, 'tis of necessity, if we would have the Composite make an Order different from the Corintbian, that this Proportion also, should be different. And this is the Reason why Vitruvius says, That the Columns, for which, in his time, they made Capitals compos'd of Ornaments, taken from the other Orders, did not make an Order different from the Corinthian, because these Columns were not longer than the Corintbian. It may also be objected, that this progressional Increase is contrary to the Rules of Vitruvius, who makes the Shaft of the Ionic Column, and that of the Corintbian, of the same Height, whereas we make the Corintbian Shaft the shorter. But its true, that the Proportions of the Ancient Architecture have been chang'd in that, as in many other Things, by the Authors of the Antique Architecture, whom all the Moderns follow except Scamozzi, who makes the Shaft of the Corintbian Column very near equal to that of the Ionic.

Now because its reasonable, that the progressional Advance of each Column, in the different Orders, should be equal, after having establish'd the whole Sum of the four Progressions, from the Tuscan to the Composite, which I make to be five mean Modules and ten Minutes, that it might be a Mean between the five Modules of the Antique, and the five and a half of the Moderns; I divide this Sum, which makes one hundred and fixty Minutes, into four equal Parts, giving forty Minutes to the Progression of each Order. So that making the Tuscan Column of fourteen mean Modules and twenty Minutes; I make the Doric of fixteen Modules; the Ionic of seventeen Modules ten Minutes; the Corintbian of eighteen Modules twenty Minutes; and the Composite of twenty Modules. But because these broken Numbers of the mean Modules are difficult to remember, I make use of my little Modules every one of which is twenty Minutes, and give the Tuscan Column twenty-two, the Doric twenty-four, the Lonic twenty-fix, the Corintbian twenty-eight, and the Composite thirty, the Progression being throughout of two of my little Modules, which make forty Minutes.

ly for the losis, the belongia, and the County be, are commonly very different in each Order, but they have nevertheless tome Agreement, in that their Redefials, as well as the Columns have a progressive

Augmentation



CHAP. VI.

Of the Height of entire Pedestals.



Ancients, Stylobatæ, are not an essential Part of the entire Column, as the Base, Capital, Architrave, Freeze and Cornice are; the Moderns, nevertheless, have added them to the other Members, which compose the entire Column, and have assign'd them their Proportions accordingly.

We find nothing more in Vitruvius concerning these Stylobatæ, than that they were of two Sorts, namely one continued, and the other broken into as many Parts as there were Columns set thereon, which that Author calls a Stylobata made in the likeness of Stools; each Part of the continued Stylobatæ, which makes a Projecture or Break right under each Column, being as a Stool, upon which the Column is set: but he says nothing of the Proportions either of one sort or the other.

In the Antique we find continued Pedestals in the Temple of Vesta at Tivoli, in that of Fortuna Virilis, and in the Goldsmiths Arch. Broken Pedestals are seen in the Theatre of Marcellus, in the Altars of the Pantheon, in the Coliseum, in the Arches of Titus, Septimius, and Constantine. The Proportions of these Pedestals, which are only for the Ionic, the Corinthian and the Composite, are commonly very different in each Order, but they have nevertheless some Agreement, in that these Pedestals, as well as the Columns, have a progressive Augmentation

Augmentation near alike, namely about one Module; the mean Height, in the Ionic, being five Modules, in the Corinthian fix, and

in the Composite seven and a half.

n

THE Moderns have deliver'd Rules for the Heights of entire Pedestals to the five Orders: and most of them augment them from Order to Order, with an equal Progression, as the Antique. Vignola and Serlio have made their Pedestals of the same Height in different Orders. The Sum of the Augmentation from the Tuscan to the Composite, is different in these Authors, as it is in the Antique, from the Ionic to the Composite, and in all the Examples exhibited in the following Table, it proceeds from two Modules to four.

To reduce all these Diversities to a mean Proportion between the Extremes, I give, according to the Method I propos'd in the third Chapter, four Semi-diameters, or Modules, to the whole Tuscan Pedestal, which are six of my little Modules; and this Height is a Mean between the extreme Heights, that is to fay, between the highest and the lowest Pedestals, which Authors have given to this Order: and I have also allow'd the Composite Pedestal fix Semi-diameters and two Thirds, which make ten of my little Modules; which is also a Mean between the Extremes that have been given it: whence it follows that the Sum of the Augmentation is of two Semi-diameters and two Thirds, which being divided into four Parts, gives two Thirds of a Module, or Semi-diameter, to each Augmentation, which makes one of the little Modules. So that the Tuscan Pedestal is of fix little Modules, the Doric of leven, the Ionic of eight, the Corinthian of nine, and the Composite of ten; the Progression being of one Module, as may be seen in the Table, where the greatest Height of the Tuscan, which is of hve Modules in Vignola, added to the least, which is three in Palladio, makes the Sum of eight Modules, the half whereof is four, the Mean which I take, and the same with fix little Modules. In the Doric Order, I take the four Modules twenty Minutes of Palladio, which make seven little Modules. In the Ionic, the greatest Height, which is leven Modules twelve Minutes, in the Temple of Manly Fortune, added to the least, which is three Modules eight Minutes, in the Theatre of Marcellus, makes ten Modules twenty Minutes, whole half is five Modules ten Minutes, which are equal to eight little In the Corintbian, the greatest Height, which is seven Modules twenty-eight Minutes in the Altars of the Pantheon, added to the least, which is four Modules two Minutes, in the Colifeum, makes twelve Modules, the half of which is fix Modules, or nine little Modules. In the Composite, the greatest Height, which is seven Modules, eight Minutes in the Goldsmith's Arch, added to the least, which is fix Modules two Minutes in Scamozzi, makes the Sum

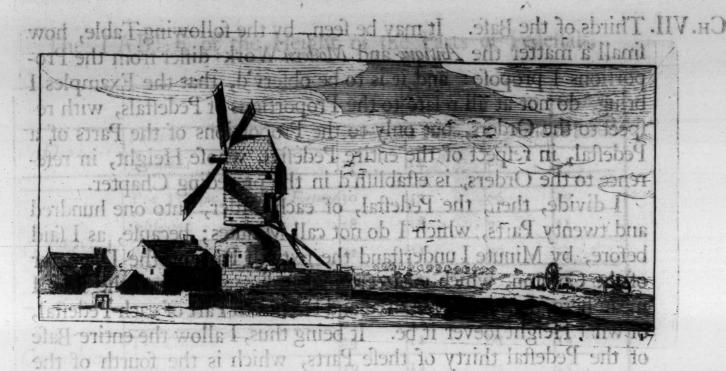
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CH. VI. Sum of thirteen Modules ten Minutes, whose Half is fix Modules twenty Minutes, or ten little Modules.

mon ment an usus ment to the Height of Pedestals. And and a stone

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and in	Scamozzi	3: 12	apaviilia ei Staria era	and old mo				
Tuscan.	Vignola	5	side toni	allo fallo				
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the whole	Palladio	4 . 05	Min.	broad Chape				
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to fay, be	Vignola and gight many	5:04	wied neely	eight is a				
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out od ye	The Altars of the Pantheon	7:28	the Progre	file of ten				
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orinthian.	Palladio Jan Jan o	5:01	in / walte.	ohibok 5				
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altohni	Vignola Walanta Allin	ela 7 alen	take, and t	lidoidw cubi				
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to the leaff, which is four Modules two Minutes, in the Colimer. makes twelve Modules, the half of which is his a odules, or nine little Modules. In the Compafite, the greatest Height, which is teyen Modules, eight Minutes in the Goldmirb's Arch, added to the



whole Pedeltal, and twenty to the Soo, which is two Thir the Baie, leaving the remaining fen for the Mouldings of the Of the Proportion of the Parts of Pedeftals.



HE Pedestal being compos'd of the Base the Die or Trunc, and the Cornice; these Parts have very different Proportions in the Works of the Ancients, as well as in those of the Moderns. The Proportion we find generally observ'd in the Antique, is, that the Bale is greater than the Cornice, and that of the two Parts of which the Base is compos'd,

the Zocco is always greater than the Mouldings, which taken together, make the rest of the Base. Among the Moderns, Serlie and Vignola have not observ'd these Proportions, for they make the Plinth, or Zocco, less than the Mouldings: in which, it seems, they defign'd to imitate the Bases of Columns, where the Plinth, which is as their Socle, makes but a Third or Fourth of the Height of the Base.

Palladio and Scamozzi have followed the general Proportions of the Antique; only they are more regular, in that they always make the Base double to the Cornice. Scamozzi in the Composite, Ionic and Doric, makes the Socle double to the Mouldings of the Base.

THERE needs but little Alteration in the Proportioos of these three Parts, to bring them to a Regularity through the whole, as I have done, in all the Orders, making the Base the fourth Part of the whole Pedestal, the Cornice the eighth Part, and the Socle two Thirds

CH.VII. Thirds of the Base. It may be seen, by the following Table, how small a matter the Antique and Modern Works differ from the Proportions I propose: and it is to be observed, that the Examples I bring, do not at all relate to the Proportions of Pedestals, with respect to the Orders, but only to the Proportions of the Parts of a Pedestal, in respect of the entire Pedestal, whose Height, in reference to the Orders, is established in the preceding Chapter.

I divide, then, the Pedestal, of each Order, into one hundred and twenty Parts, which I do not call Minutes; because, as I said before, by Minute I understand the fixtieth Part of the Diameter of the Column, which is a certain Measure; whereas the Part I mean here, is the one hundred and twentieth Part of each Pedestal, of what Height foever it be. It being thus, I allow the entire Base of the Pedestal thirty of these Parts, which is the fourth of the whole Pedestal, and twenty to the Socle, which is two Thirds of the Base, leaving the remaining ten for the Mouldings of the Base. I give fifteen of these Parts to the Cornice, and the rest, which are feventy-five, to the Die or Trunk. This agrees with the mean Proportions, taken from the Examples of the Antique, produc'd in the following Table, which contains the Number of Particles that each Part of the Pedestal has in all the Orders. Thus for the Height of the Socle, I add the greatest Height, which is thirty, in the Temple of Manly Fortune, to the least which is ten, in the Arch of Constantine, which make forty, the half whereof is twenty, which I allow it. By the same Method, I find the ten Parts which make the Height of the Mouldings of the Base, adding the greatest Height given them, which is fourteen in the Arch of Constantine, to the least, which is fix in Palladio, which make twenty, the half of which is ten, the Height I affign them. In like manner, I find the feventy-five Parts, which make the Height of the Die, adding the greatest Height, which is eighty-four in the Goldsmith's Arch, to the least, which is fixty-fix in the Temple of Manly Fortune, which, together, make one hundred and fifty, whose half is seventy-five, as I give it. Lastly, the Height of the Cornice is found by adding the nineteen Parts of the Temple of Manly Fortune, to the eleven of the Colifeum, which make thirty, the half of which is fifteen, as I allow it.

Tuer E needs but little Alteration in the Proportions of these three Parts, to bring them to a Regularity through the whole, as share done, in all the Orders, making the Base the fourth Part of the whole Pedellal, the Cornice the eighth Part, and the Socie two die whole Pedellal, the Cornice the eighth Part, and the Socie two die whole Pedellal, the Cornice the eighth Part, and the Socie two diese whole Pedellal, the Cornice the eighth Part, and the Socie two

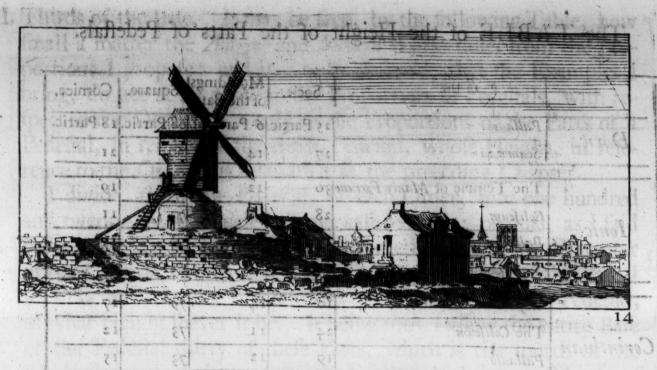
Louis and Done, makes the Socie double to the Mouldings of the

The TABLE of the Height of the Parts of Pedestals.

	Total Service Companies and the	Socle.	Mouldings of the Bale.	Square.	Cornice.
Doric.	Palladio	25 Partic	6 Particul.	68 Partic.	18 Partic
	Scamozzi	27	14	60	21
A WINTERN	I'ne Temple of Manly Fortune	30	12	66	19
Ionic.	Colifeum	28	8	73	11
Ionic.	Palladio	22	11	70	17
	Scamozzi	25	12	65	18
	Constantine's Arch	10	14	79	17
Corinthian	The Colifeum	24	11	73	12
Corinipian	Palladio	19	12	73	15
	Scamozzi	18 11	11	77	14
3 1/1	Tim's Arch	26	14/19/19/	67	13
	The Goldsmiths Arch	19	9	84	11
Composite.	Palladio ni noifoste in 200	2.I. ()	10	74	15
hiteclure	Scamozzi inijoqui hom	21	10	74	15
th, and the	Septimius's Arch	45	14	技术	14
ich, echie	Mean Measures	20	10	75	15

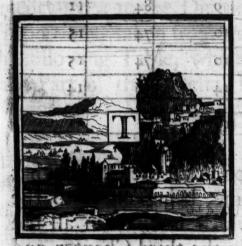
PEDESTALS have this, besides, common in all the Orders, that the Breadth of their Die is always the same, being equal to the Projecture of the Bases of the Columns, which is alike in all the Orders, as it has been already established in the third Chapter, and shall be more fully explain'd hereafter.





CHAP. VIII.

Of the Diminution and Swelling of Columns.



CHAP.

O give Satisfaction in two Points that are the most important in Architecture; namely, Solidity or Strength, and the Appearance of Solidity, which, as has been already said, makes a very principal Part in the Beauty of Buildings; all Architects have made their Columns lesser above than below, which is call'd the Diminution: Some also have made

them a little thicker towards the middle than at the Bottom, and that is what they call the Swelling.

Vitruvius would have the Diminution of Columns differ according to their Height, and not according to the Number of Modules: fo that a Column of fifteen Feet high, should be diminish'd the fixth Part of its Diameter below, and one of fifty Feet high, should be diminish'd but the eight Part, and so in other Heights he gives a proportional Diminution. But we don't find these Rules observ'd in the Antique: For the great Columns of the Temple of Peace, of the Portico of the Pantheon, those of the Forum Romanum, now call'd Campo Vaccino, and of the Basilic of Antonine, have no other Diminution than those of the Temple of Bacchus, which are but a fourth Part of the Height of the others, and there are some very large, as those of the Temple of Faussina, of the Porch of Septimius, of the Temple of Concord, and of the Baths of Diocletian, that have more Diminution than others which are less by half, as those of the Ar-

ches of Titus, Septimius, and Constantine. Lastly, those Columns that are less than fifteen Feet, have not so great a Diminution as the fixth Part which Vitruvius gives them, but about two Fifteenths, and great Columns, which even exceed the fifty Feet of Vitruvius, have yet a greater Diminution than he prescribes them, being also two Fifteenths, instead of an Eighth, which according to the Rule

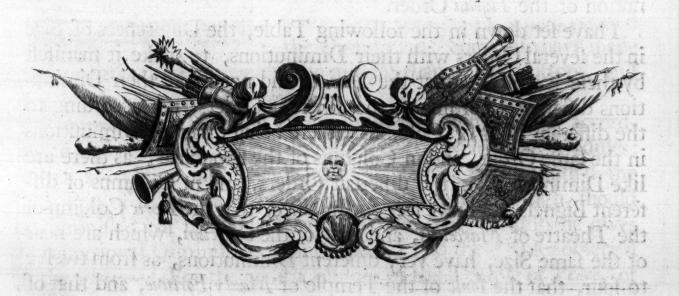
of Vitruvius, they ought to have.

THE Difference of the Orders does not oblige one to make also a different Diminution, there being small and great Diminutions in different Works of all the Orders. We must however except the Tuscan Column, which Vitruvius diminishes even to a fourth Part. But as some of the Moderns have not followed Vitruvius in that particular, Vignola making its Diminution but a Fifth, and the Column of Trajan, which is the only Tuscan Work remaining of the Antients, having its Diminution still much less, being but a ninth Part; to keep a Medium between these Extremes, I allow a fixth Part of the Diminution of the Tuscan Column, instead of the two Fifteenths only, which the other four Orders have. For though according to Reason, were we to change the Diminution according to the Orders; we ought to make it less rather than to augment it, in those where the Columns are shorter in proportion to their Thickness, because 'tis in these the Diminution is most apparent; nevertheless this Diminution, which Vitruvius gives the Tuscan Column, being followed by the generality of Architects, Ithink some Regard should be had to Custom, which is one of the principal Laws of Architecture, and that we ought something to augment this Diminution of the Tuscan Order.

I have set down in the following Table, the Differences of Size in the feveral Orders with their Diminutions, to make it manifest by these Examples, that the Ancients did not make their Diminutions different according to the different Orders, nor according to the different Sizes of Columns; there being different Diminutions in the same Order, and in Columns of the same Size; as there are like Diminutions in the different Orders, and in Columns of different Bigness. For we see, for Instance, that the Doric Column of the Theatre of Marcellus, and that of the Colifeum, which are near of the same Size, have very different Diminutions, as from twelve to four, that the Ionic of the Temple of Manly Fortune, and that of the Colifeum, which are also near the same bigness, have their Diminution different as from feven to ten, and that on the contrary, there is the same Diminution in the Column of the Temple of Manly Fortune, and that of the Porch of Septimius, though one is of the Ionic Order, and has only twenty-two Feet in Height, and the other is of the Corintbian Order, and is thirty-seven Feet high.

** G Now

CH. VIII. Now from all the different Diminutions given to those Columns, whose Examples are produc'd in this Table, I take a Medium, adding the Numbers of the least Diminution to that of the greatest, and taking the half of this Number, which is about eight Minutes. For adding the least Diminution, being that of the Doric Column of the Colifeum, which is but four Minutes and a half, to the Number of the greatest, which is that of the Doric of the Theatre of Marcellus, and rifes even to twelve Minutes, the half of these two Numbers, which together make fixteen and a half, is eight and a quarter; so likewise, if we add the Number of the least Diminution of the Columns that remain, which is fix and an eighth, in the Column of the Basilic of Antonine, to the greatest, which is ten and an half of the Column of the Temple of Concord, the half of these two Numbers, which together make fixteen and five Eigths, is eight and five Sixteenths. Now this Measure of eight Minutes, which makes two Fifteenths of the Diameter of the Column, is the fifth Part of my little Module, or four Minutes on each Side. have not here inferted the Diminutions of the Moderns, because they like the Antique, differ in different Authors, and in different Orders.



nution different as from fewer 9 can had that on the control there is the Game Distance in the Common of the Temple of March Farture, see that of the Parch of the march, though one to

the Carabban Order, and is mirry-leven Lect high-

c Order, and has only twenty-two Feet in Height, and

THE

The TABLE of the Diminution of COLUMNS.

Cu. VIII. this Swelling, and to trace the Line of its Piofile: to that the two

	and instruction and unity to		Hei e Si	ght	D	iamete	r	Dir	nin
	ax the to be a since the ca	Feet	Inc	hes	F	Inche	S	M	(in.
Doric.	The Theatre of Marcellus	21	0	0	3	0.	0	12	0
Dorn.	The Colifeum	22	01	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2	08 0	1	4	01
	The Temple or Concord	36	0	q	14	2	14	01	141
Ionic.	The Temple of Manly Fortune	22		-0		11	0	7	19
	The Colifeum	23	0	ಂ	2	8	14	10	्
voluer build	The Temple of Peace	49	3	0	5	8	0	6	
971972 987	The Portico of the Pantheon	36	17	0	4	6	0	6	
	The Altars of the Pantheon	01	10	0	-	4	1/2	8	a
	The Temple of Vesta	27	5	0	2	11	0	6	- 2
	The Temple of the Sibyl	19	0	0	2	4	0	8	0
Corinthian.	The Temple of Faustina	136	0	0	4	6	0	8	0
	The Columns of the Campo Vaccino	37	6	0	4	. 6	1/2	6	1/2
	The Bafilick of Antoninus	37	0	0	4	5	1 2	6	1 8
	Constantine's Arch	21	8	0	2	8	3	7	0
	Inside of the Pantheon	28	6	0	3	5	0	7	0
	The Portico of Septimius	37	0	0	3	4	0	7	1
	The Baths of Diocletian	35	0	0	4	4	0	11	3
Composito	The Temple of Bacchus	10	8	0	t	4	14	6	1 2
Composite.	Titus's Arch	6	0	0	I	11	3	7	0
711111111111111111111111111111111111111	Septimius's Arch	21	8	0	2	8	1	7	0

The first and most general, is to begin the Diminution at the Bottom of the Column, and to continue it to the Top. The second, which is also practic'd in the Antique, is not to begin the Diminution but from a third of the Height above the Base of the Column. The third, of which we find no Example in the Antique, is to make the Column thicker towards the Middle, and to diminish it towards both Ends; that is, towards the Base and Capital, which gives it, at it were, a Belly, which they call the Swelling.

Some of the Moderns have given this Swelling to Columns, founding their Practice upon a Place in Vitruvius, where this Author promises to give Rules for doing it; but has not perform'd the same. Vignola has invented a very ingenious Way to regulate

CH. VIII. this Swelling, and to trace the Line of its Profile, so that the two Lines, which make the Profile of the Column, bend towards the Extremities in the same Proportion, bowing twice as much towards the Top as towards the Bottom, by reason the upper Part is twice as long as the lower. Monf. Blondel, in his Tract of the four principal Problems of Architecture, has shewn how this Line may be describ'd at one single Stroke, with the Instrument Nicomedes invented to draw a Line call'd the first Conchoid of the Ancients. This Method can serve only for the Line of Diminution, which goes from the Bottom of the Column to the Top, so that it does not bend inwards towards the Bottom, but falls perpendicularly: unless one would have this Bending begin above the Third from the Bottom, which ought to be strait, making two parallel Lines: For in my Opinion, the Column ought not to be diminish'd below, fince neither the Architects of the Antique, nor even the greatest part of the Moderns have done it.





CHAP. IX.

Of the Projecture of the Base of Columns.



HE Projecture of the Bases of Columns, is another of those Things which I believe were originally alike in all the Orders of the Ancients: for we find in the Antique, as well as in the Modern Authors, they are either equal or indifferently sometimes greater, sometimes less in the same Orders. For Instance in the Coliseum, the Doric has the same Proje-

Aure of Base, as in the Temple of Concord, which is Ionic, and as the Corintbian in the same Coliseum; and the Tuscan of Serlio has a greater Projecture of Base than his Composite; when on the contrary, the Composite of Scamozzi has a Projecture larger than his Tuscan.

THE Rules Vitruvius lays down in this Case, are very obscure. When he speaks in general of the Projecture of Bases, he allows them even a sourth of the Diameter on each side, which much exceeds the greatest rojecture sound in the Antique; and when he treats of the Ionic Base, which he makes nothing different from the Corintbian, he scarce makes it larger than the least of the Antique.

No w the Breadth which I give the Bases of all the Orders, is eighty-four Minutes, which are forty-two on each Side, by reason of the twelve which I add to the thirty of the Semi-diameter. For twelve Minutes, as was said in the third Chapter, answer to three Parts of the five, of which my little Module consists, which being twenty Minutes, each of these Fifths contains four Minutes:

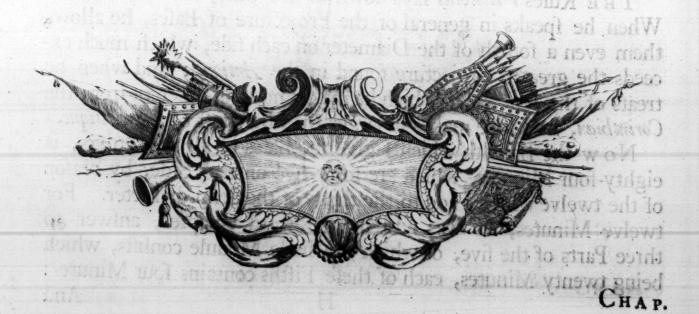
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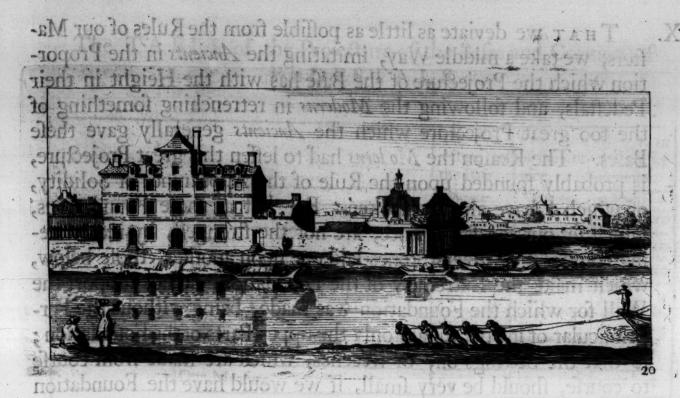
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CH. IX. And these twelve Minutes differ very little from a Mean of those Proportions found in the Antique, and in the Moderns; as may be prov'd by the following Table, from which this mean Proportion may be taken, as was done in the preceding Chapter, for the Diminution of Columns. For adding the fum of the least Projecture, which is forty, in the Corintbian of the Coliferen, to the greatest, which is forty-four, in the Arch of Titus, we shall find eighty-four, whose Half is the forty-two requir'd: And again, if we add the least Projecture we find in the remaining Examples of the Table, which is forty-one, in the Portico of the Pantheon, to the greatest, which is forty-three in the Temple of Manly Fortune, we likewise find the fame Number of eighty-four Minutes.

The Table of the Projecture of the Bases of Columns.

the decidence have any	Fuscan	Doric	lonic	Corinth.	Compol.
The Portico of the Pantheon	f the	ame o	Proje	44/4 10	
The 3 Columns of Campo Vaccino			C	42	And the second of
Pilasters of the Portico of the Pan.	wind.	aria. J		43	
The Baths of Diocletian	redsom			42	43
Trajan's Column	40 yy 97				
Palladio : Over 101 : the same	49 To 8	40,	41	42	42
Scamozzio Moitz de Moizzomos	40	42	41	40	4 I
Vignola 10 laupa radia and v	41	41	42	42	42
Serlio mutemot, notice greater solution	420 0	44	41	40	41
The Temple of Manly Fortune	rise farm	III I	43	A PROPERTY	A Control of the Cont
The Colifeum	(2007)	40	40	40	
The Temple of Bacchus	078073	emple	r aug u	डेड. इ.इ.	41051118
Titus's Arch	7121 11 75	1 26070	in Jean	in the	44
Septimius's Arch		AN 2 4311	TUELD S	EU 10 97	41090019





guel out si projeto CHAP. X,

Of the Projecture of the Base, and of the Cornice of Pe-



S Pedestals were not so much in use among the Ancients, as they have been since, the Moderns have not tied themselves up to follow the Proportions of those which remain of the Antique: but above all, they have thrown aside the great Projectures the Antique gave their Bases, which are commonly larger by a Third or more, than they are in the

Modern Authors. What can be gather'd from the general Rules, practis'd by the Ancients, is, that they proportion'd this Projecture to the Height of the Pedestals, which the Moderns have not observed, making it always near the same in all the Orders, where the Height of the Pedestals is very different: and I can't think they acted reasonably herein; for if in Columns, the Projecture of the Bases be equal in all the Orders, though the Heights of the Columns are different, 'tis because the Bases themselves have always an equal Height in all the Orders, except only the Tuscan, where it is somewhat lower than in the others, by reason it comprehends the Cincture at the Bottom of the Column: Now by the same Rule the Projectures of the Bases of Pedestals ought to be different, being proportion'd to the Height of the whole Pedestal, which is different in the different Orders.

THAT

THAT we deviate as little as possible from the Rules of our Ma-Сн. Х. sters, we take a middle Way, imitating the Ancients in the Proportion which the Projecture of the Base has with the Height in their Pedestals, and following the Moderns in retrenching something of the too great Projecture which the Ancients generally gave these Bases. The Reason the Moderns had to lessen this great Projecture, is probably founded upon the Rule of the Appearance of Solidity, of which I have already spoken: For just as those Foundations, which let out too far at once, are not the ftrongest, by reason being compos'd of divers Stones laid one upon another, those below, which make the Extremity of the Foundation, do not support the Wall for which the Foundation was made, being without the Perpendicular of it, but fustain only the upper Parts of the Foundation: to that the Settings-off, or Recesses, which are made from course to course, should be very small, if we would have the Foundation folid; fo likewise Bases cannot appear solid and capable of bearing the Trunk of the Pedestal, if their Projecture is too large.

I make, therefore, in all the Orders, the Bases of the Pedestals, without including their Zocolo or Plinth, with a Projecture equal to their Height; and thus as the Height of the Bases is different in the Pedestal of each Order, the Projecture of the Base is also diffe-

rent in all the Orders.

As for the Projecture of Cornices of Pedestals, the Ancients, and most of the Moderns agree, in that they usually make it either equal or a small matter larger than that of the Base; and it is but consonant to Reason, that a Cornice, which is made to cover, should advance beyond what is cover'd by it. De Lorme, nevertheless, says, that the Base ought always to have a greater Projecture than the Cornice, although the contrary appears in his Figures.

THE following Table shews the Proportions of these Projectures, in the Works of the Ancients and Moderns, which I compare with those I give them. The Number of Minutes is the Projecture of the Base and Cornice, taken from the Naked of the Die of the Pedestal outwards. The Heights of the whole Pedestal are measur'd

by the mean Module.

The mean Proportions, in these Projectures of the Bases and Cornices of Pedestals, are not precisely the Medium of the Extremities, found in the Examples produc'd in the Table: It is sufficient that they are between both, and that as there are Instances of greater, so there are also of less. For Example, the mean Projecture I give the Base of the Pedestal in the Doric Order, which is twelve Minutes, is greater than what Vignola gives it, which is but eleven, and less than that of Palladio, which is sixteen, and so of the rest.

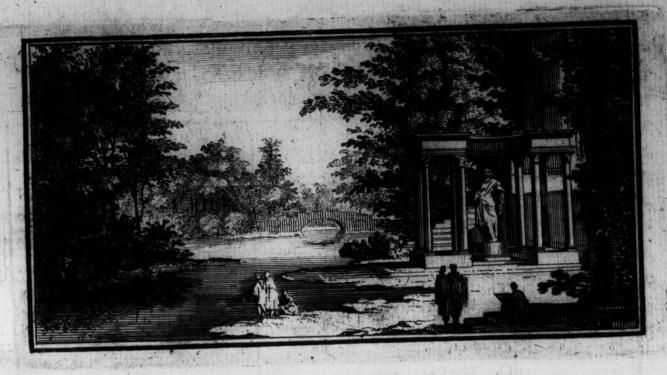
The TABLE of the Projecture of the Bases and Cornices of. PEDESTALS.

		The Pro- jecture of the Base.	Projecture of the Cor- nice.	Height of the entire Pedestal.
		i Minutes.	Minutes.	im.Mod.Min.
	Palladio	16 .	16	4 20
- Doric.	Vignola	11	11	5 10
	Our Measure	12	14	4 20
The state of the s	The Temple of Manly Fortune	26 4	13	7 4
Ionic.	Palladio	14	14	5 5
10mic.	Vignola	14	16	6
	Our Measure	14	17	5 3
er it is look b	The Temple of Vesta at Tivoli	24 1/2	24	6 7
Corinthian.	Palladio	16	16	5
Gor misian.	Vignola	13	13	6 6
	Our Measure	15	19	6
est fractions	Titus's Arch	128	27	8 15
dateM odd	Septimus's Arch	24 3	25 1/3	6
Composite.	Palladio	14	14	6/9 3
is's count is	Vignola	13	13	7
nio anit di	Our Measure	16	22	6

dure is much left than its Height;

cretion, for Inflance, with regard to the different Circumstances of the Diverticy of Asped's, and the Size of Buildings; for they pretend, that form require greater Publichance in their Cornicas than others, on seconds of the Meanuels or Remotenets which makes a Diffe-

reace of View, so well as of the Beight or Lowners, making the Projectures



CHAP. XI.

Of the Projecture which the Cornices of Entablatures ought to have.



ITRUVIUS gives one general Rule for all the Projectures of the Members of Architecture: namely, that their Projecture should be always equal to their Height; but 'tis certain, this ought to be understood only of the Projecture of the entire Cornices of Entablatures, with respect to their Height: because there are particular Members in Cor-

nices, as the Dentel, whose Projecture is much less than its Height; and others, as the Corona, where it is always much greater: And this Rule, even for entire Cornices, we do not find exactly observ'd, neither in the Antique, nor among the Moderns: For most commonly, in the Antique, the Projecture of Cornices, is somewhat less than their Height, contrary to what we see in the Books of the Moderns, where the greatest part of Cornices have more Projecture than Height.

MosT Architects are of Opinion, that the main Point of Architecture confists in knowing how to change the Proportions with Discretion, for Instance, with regard to the different Circumstances of the Diversity of Aspects, and the Size of Buildings; for they pretend, that some require greater Projectures in their Cornices than others, on account of the Nearness or Remoteness which makes a Difference of View, as well as of the Height or Lowness, making the Projectures

Part I. five Kinds of Columns.

Projectures to appear Lesser or greater than they are, they say 'tis necessary to remedy this Inconveniency, by augmenting or diminishing the Projectures: and they would persuade us, that the Divertity of these, which is found in the Works of the Antique, is to be attributed to this Reason. But 'tis evident, the Ancients had no fuch Intention, fince in Structures, where the Projectures ought to have been greater, on account of the Aspect, whose Distance, according to the reasoning of the Moderns, should demand a large Projecture; we find that on the contrary, the Ancients have made it very small, as appears by the Pantheon, where the Projecture is less in the Cornice of the Portico, than in that of the Infide of the Temple, where the View is, without comparison, much less. It is also manifelt, that the Projectures have not been chang'd, on account of the Size of the Module, that regulates the Dimensions of the Building, because we find the Projecture is equal to the Height, or even that it is less in the greatest Structures, as is evident in the Temple of Peace, the Columns of Campo Vaccino, and those of the Baths of Diocletian, which are Antique Buildings, that have the greatest Module: for in these great Orders, the Projecture of the Cornices is less than in the little ones; such as the Temple of Vesta at Tivoli. And what makes it plain, that all this Diversity has no other Foundation than Accident, is, that there are also small Buildings where the Projecture is less than in the great ones, as appears in the Altars of the Pantheon, where the Projecture is less than in the Portico, whose Order is near four times as big. I shall treat hereafter of the Change of Proportions more fully, in a Chapter by itself.

THE following Table is to prove the Truth of the Examples

before cited.

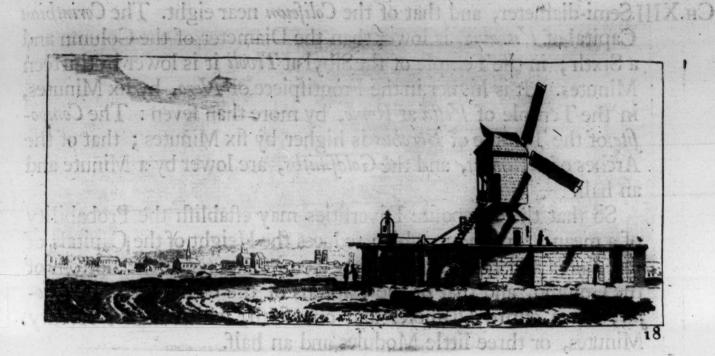
Ch. XI.

The TABLE of the different Projectures of Entablatures.

There is more Projecture Height in the Cornices	thần	Size of the Order		Size of he Order.
I STREET CHICAGOUST & NAT. ST	Min.	F. In.	Min.	F. In.
Tem. of Vesta at Tiv. by	40	2.5	Goldsmiths Arch by 6 0	17 0
Ionic of the Colifeum	1 0	25	Altars of the Pantheon 7.0	16 0
Doric of the Colifeum	0 4	31	Arch of Titus OC	25 0
Arch of Constantine	00	STATE OF THE PARTY	I Jonic of the Th. of Mar. 9 c	28 0
Porch of Septimius	2 0	MANAGEMENT STATES	o Temple of Bacchus 50	28 0007
Infide of the Pantheon	0 3		O & Corinibian of the Colifern 3 0	30 2
Temple of Concord	16	53 100	7 Temple of Manly Fort. 12	32 10116
Temple of Faustina	0	lates tr	Arch of Septimius 13	33 0
Ionic of Scamozzi	3	c is eq	Portico of the Pantheon 2	54 0
Corinthian of Palladio	0	LITES, R	3 Columns of Cam. Vac. 1	58 0
Corinthian of Vignola	4	o Augusti	Temple of Peace 7	0 58 0
Composite of Palladio	I	0	Ionic of Palladio 7	0
Composite of Scamozzi	I	1	Ionic of Vignola 1	1 original

THE Diversity of Proportion, in all these Cornices, has made way for reducing it to a Mean, which is to make the Projecture equal to the Height, in all the Orders except the Doric, when it has Mutules; because their Length obliges us to give the entire Cornice more Projecture than Height: but if this Cornice be made without Mutules, as it is in the Coliseum, the Projecture then may be equal to the Height, as it is in that samous Structure.





CHAP. XII. Of the Proportion of Capitals.



LTHOUGH the Bases of different Orders are very different, some being more plain, and others having a greater number of Mouldings, yet they are still of the same Height, each having the Semidiameter of the lower Part of the Column, the Tuscan only excepted, where the Cincture, at the bottom of the Column, is comprehended in this

Semi-diameter. But it is not so with the Capitals, of which there are three several Heights in the five Orders, the Tuscan and Doric Capitals having the same Height as their Base, and the Corinthian and Composite having an entire Diameter and a Sixth, which is three little Modules and a half; and lastly, the Ionic, which has a particular Proportion, from the Top of the Abacus to the Bottom of the Volutes, being the Semi-diameter of the Bottom of the Column, and an eighteenth Part of this Semi-diameter; and from the Top of the Abacus to the upper Part of the Astragal at the Head of the Column, eleven of these Eighteenths, which indeed are Proportions somewhat confus'd.

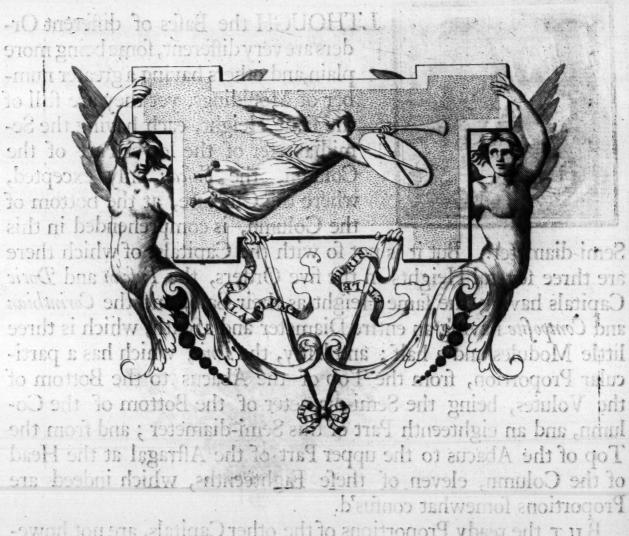
But the ready Proportions of the other Capitals, are not however found in all the Antique Works, nor in all the Modern Authors. The Tuscan Capital of Trajan's Column, is less than the Semi-diameter at the Bottom of the Column, by an entire Third; the Doric of the Theatre of Marcellus, is near three Minutes more than a

CH.XIII.Semi-diameter, and that of the Coliferen near eight. The Corintbian Capital of Vitruvius is lower than the Diameter of the Column and a Sixth; in the Temple of the Sibyl at Tivoli it is lower by thirteen Minutes. It is higher in the Frontispiece of Nero, by fix Minutes, in the Temple of Vesta at Rome, by more than seven: The Compofite of the Temple of Bacchus is higher by fix Minutes; that of the Arches of Septimius, and the Goldsmiths, are lower by a Minute and an half.

> So that these opposite Diversities may establish the Probability of a mean Proportion, which reduces the Height of the Capitals of the Tuscan and Doric Order to the Semi-diameter of the Bottom of the Column, and that of the Capitals of the Corintbian and Compofite, to an entire Diameter and one fixth, which makes feventy

Minutes, or three little Modules and an half.

CHAP. XIL Of the Troportion of Capitals.

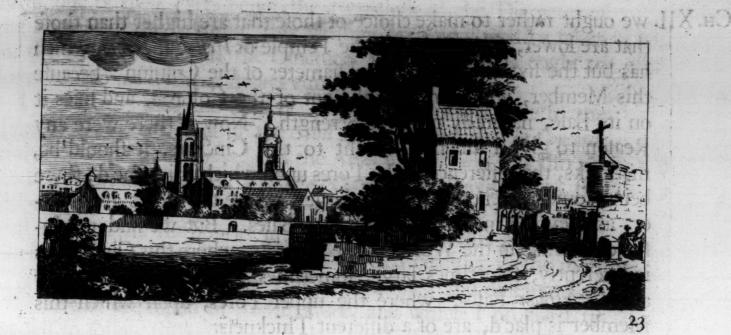


Bur the ready Proportions of the other Capitals, are not however found in all the Antique Works, nor in all the Modern Authors: I to A the Capital of Trajur's Column, is less than the Semi-diameter at the Bottom of the Column by an entire Third; the Doric of the Theatre of Marcellas, is near three Minutes more than a Senid

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CHAP. XIII.

Of the Proportion which the Astragal and Cincture of the Shaft of Columns ought to have.



N all the Orders, the Columns have certain Members that terminate their Body or Shaft, which commonly are the same: namely, at the Top, an Astragal with its Fillet, and a pretty large List or Cincture at the Bottom. These Parts have no certain determin'd Proportion in the Antique, where we find they are sometimes greater, sometimes less with-

out any visible Reason for this Diversity. The Moderns have done the same Thing: but my Opinion is, we may give these Members the same Proportions in all the Orders, on the same account that the Height of Entablatures was made alike in the different Orders, because as the Column lengthens in the more delicate Orders, these Parts, though the same in Size, become, or at least appear, more delicate in proportion to the Height of the Column

delicate in proportion to the Height of the Column.

As to the Cinctute, at the Foot of the Column, I allow its Height the twentieth Part of the Diameter there. In the Pantheon, it comes very near this Bigness, which Vignola, Serhio and Alberti have sollowed; and in other Antique Buildings, this Member is sometimes higher, as in the Temple of Antonious and Faustina, in that of Bacchus, in the Arch of Septimius, and in the Baths of Diocletian; sometimes it is lower, as in the Temple of Vesta at Rome, in that of Manly Fontune, and in the Arch of Titus. But in my Judgment,

we

Ch. XII. we ought rather to make choice of those that are higher than those that are lower, such as that of the Temple of Vesta, at Rome, which has but the sixtieth Part of the Diameter of the Column: because this Member, which makes the Foot of the Column, and fixes it on its Base, naturally requires Strength. Now if there were any Reason to give a different Height to this Cincture, it should be, methinks, the difference of the Tores upon which it is plac'd; there being some Pretence to make it larger, where the Tores are greater, as they are in the Attic and Ionic Bases. But we find no Instance of this, in the Works of the Ancients, where this Cincture is indifferently, sometimes large, sometimes small, upon the Attic and Corintbian Bases, where the upper Tores, upon which this Member is plac'd, are of a different Thickness.

We sometimes find, that instead of this Cincture, there is an Astragal with a Fillet, as in the Temple of Peace, in the three Columns of Campo Vaccino, in the Basilic of Antonimus, and in the Arch of Constantine; which some of the Moderns, as Palladio, Scamozzi, De Lorme, and Viola, have imitated: but I think one may affirm that those who use the Cincture only, have most Reason on their Side, as well because of the Consusion that so great a number of Mouldings produces, as because the Standing of the Column appears less firm upon an Astragal, whose Roundness looks more likely to let the Column slip, than to keep it in its Place, as the

Squareness of the Cincture seems capable of doing.

As for the Height of the Astragal at the top of the Column, I make it the eighteenth Part of the Diameter of the Bottom of the Column, which is the fixth Part of the little Module, as it is in the Frontispiece of Nero, in the Basilic of Antonine, and in the Temple of the Sibyl at Tivoli; keeping the Mean between the Extremes we see in the Antique, as in the Arch of Septimius, the Market of Nerva, the Temple of Manly Fortune, and that of Bacchus, where this Astragal is a Third and even half as large again; or on the other Side, as in the Temple of Vesta at Rome, where it is scarce half so big. The Excesses, into which the Moderns have run, are no less different; there being some, as Serlio, who give it not above the half of what it has in Palladio, and Barbaro.

But what more especially inclines me to this Proportion of the Astragal on the Top of Columns, is what is determin'd in the Doric Order, where it ought to be equal to the breadth of the Eye of the Volute, as shall be explain'd in its proper Place: for this Proportion being establish'd in this Order, I see no Reason to change it in the others. On the same account, the Proportion of the Cincture, at the Bottom of the Tuscan Column, being determin'd by the Division of the upper Half of the Base, into sive

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Parts, one of these Parts being the twentieth of the Diameter of the Bottom of the Column, this Measure may very well be taken for the Rule of what all the Cinctures in other Orders ought to have, and so make them always equal.

I make the Fillet the Half of the Astragal, as is done in the Temple of Bacchus, that of the Sybil at Tivoli, and that of Concord, in the Basilique of Antonine, and the Arch of Septimius: as also according to what Scamozzi, Palladio, Cataneo, &c. have done; the Instances that are to the contrary being in opposite Excelles, as well among these Authors as in the Antique; and this justifies the Choice I have made of a Medium, which I consider as the most certain Rule to reconcile the various Opinions, and different Examples, that are found in Architecture, and which I proposed to my self to follow through the whole Course of this Work.

AFTER having seen, in this first Part, the Proportions in general, of the principal Members of Architecture, comparing those of the several Orders one with another; you will, in the second Part, find the particular Proportions of each of these Members, after the same Method, with all the Particularities of the different Characters they have in the several Works of the Antique, and in the Modern Authors, who have treated of the Orders of Architecture.



The EXPLANATION OF

of the Rule of what all the Cinclures in other Orders ought to have, and so make them way quake I make the Fible the Half of the Miller all, I is done in the I make the Fible that of the Sybil at Tivoli, and that of Concord,

THIS Plate contains all that has been explained in the first Para which treats of the Proportions common to all the Orders, as well what appearains to their Heights, as to their Breadths and Projectures; the Heights being determined by entire Modules, and the Projectures by the Division of the Module into five: supposing, as has been said, that the Module is the Third of the Diameter of the Bot-

tom of the Column, which I call the little Module, wolld of 1191 ve

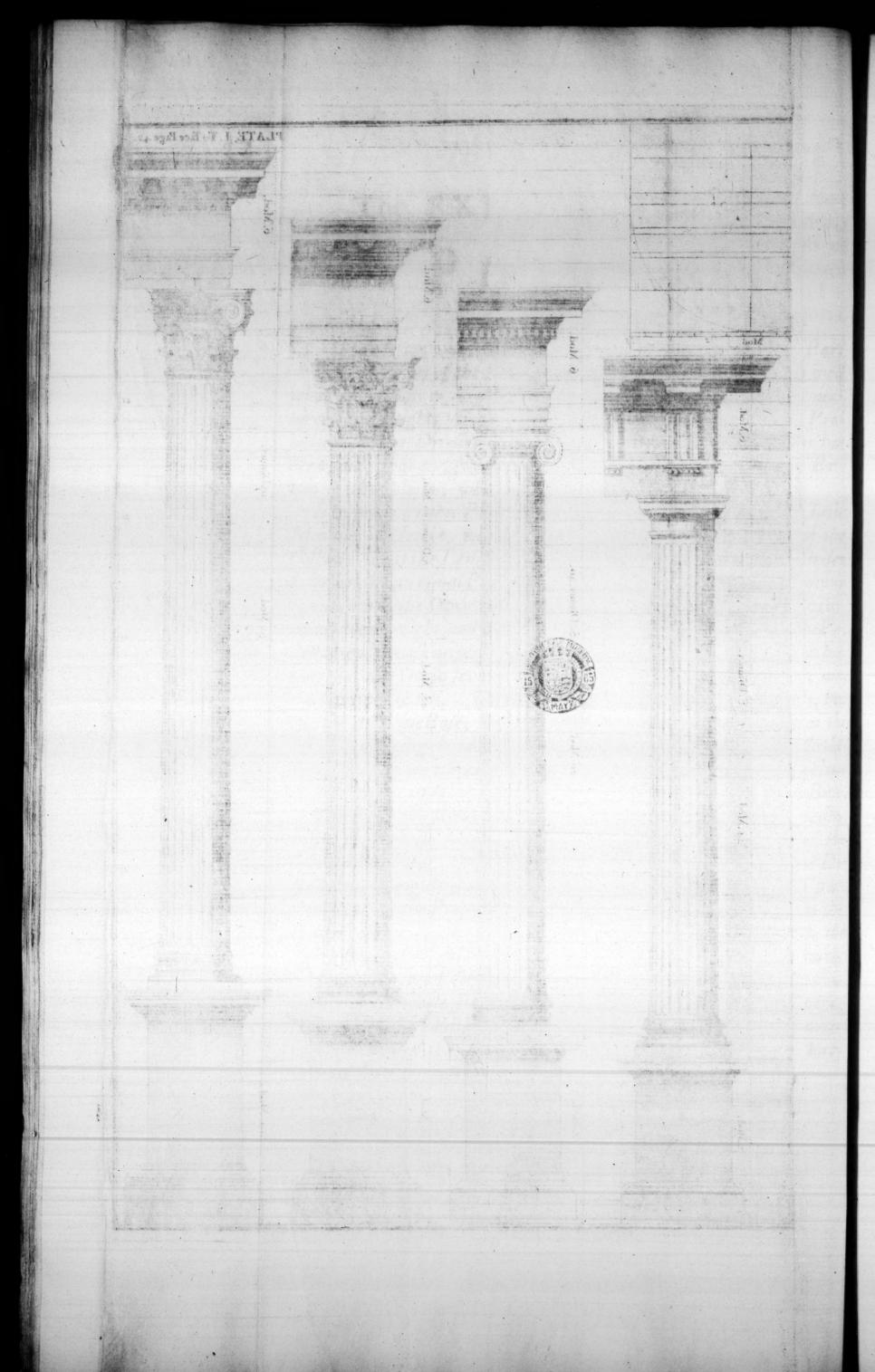
It appears by this Place, that all the Entablatures have fix little Modunes in Height, which makes two Diameters of the Bottom of the Collum. That the Length of the Column goes encreasing, from Order to Order, by an equal Progression of two Modules, the Tuscan baving twenty-two, the Dorictwenty-foun, the lonic twenty-fix, the Corinthian twenty-eight, and the Composite thirty Modules. That all the Pedestals go likewise increasing, but only by one Module; the Tuscan baving six, the Doric seven, the Ionic eight, the Corinthian nine, and the Composite ten. That each Pedestal divided into four Parts, have one for its whole Base, and the Half of one for its Cornice. That the whole Base being divided into three Parts, one is given to the Mouldings, and the two others to the Zocolo. And lastly, that the Projecture of the Base is equal to the Height of the Mouldings of the same Base.

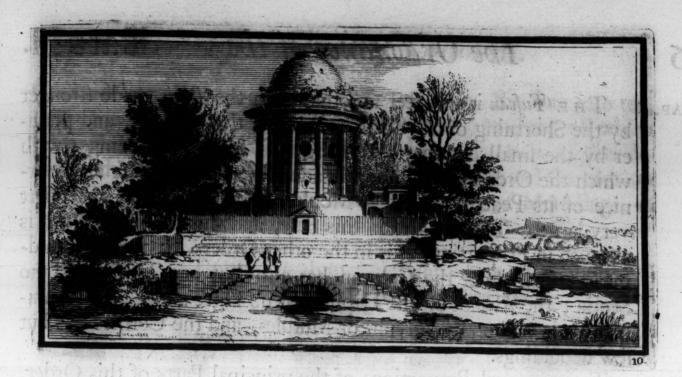
This Plate also shews, that the other Projectures are determined by Fifths of the little Module, the Projecture, which the Shaft of the Column has below, beyond what it has above, which is call d the Diminution, being determined by one of these Fifths, which is the S pace from A to B; the Projecture of the Cincture or Fillet, which is at the Bottom of the Shaft of the Column, by another Fifth, which is the Space from B to C; that of the upper Torus, and of the Fillet below the Scotia, by another Fifth, which is the Space from C to D; and the Projecture of the whole Base, by the Part which is from D to E, supposing that each of these Fifths contains four Minutes, of which, the Diameter at the Bottom of the Column, contains sixty, the mean Module thirty

deter

and the little Module twenty.







THE

ORDONANCE

Of the FIVE KINDS of

COLUMNS,

METHOD of the ANCIENTS.

Pedefal is divide II. of T. A. A. T. der, as in all the other

Of Things appertaining to each ORDER.

Of the TUSCAN Order.



HE Orders of ARCHITECTURE invented by the Greeks, were no more than Three: namely, the Doric, Ionic, and Corinthian; the Romans have added to these the Tuscan and the Composite, by some call'd the Italic; but these two Orders, have not, properly speaking, any effential Characters different from 35 thole of the Greeks: for the Characters

of the Tuscan are near the same as those of the Doric, and those of the Composite very much resemble them of the Corintbian, which is not so in the three Greek Orders, where the Things which distinguish each from other, are very considerable and remarkable, as is more particularly explain'd in the first Chapter of the first Part.

M

divided

THE Tuscan is in effect no other than the Doric made stronger by the Shortning of the Shaft or Body of the Column, and plainer by the small Number and Largeness of the Mouldings, with which the Orders are commonly adorn'd; for the Base and Cornice of its Pedestal have few Mouldings, and for the most part very large. The Height of this Base, and this Cornice, which is as much in Proportion, as is in the other Orders, has fewer Mouldings; the Bale of the Column has also but one Torus, and no Scotia; the Abacus of the Capital has no Ogee above; the Entablature is without Triglyphs or Mutules, and the Cornice has but few Mouldings.

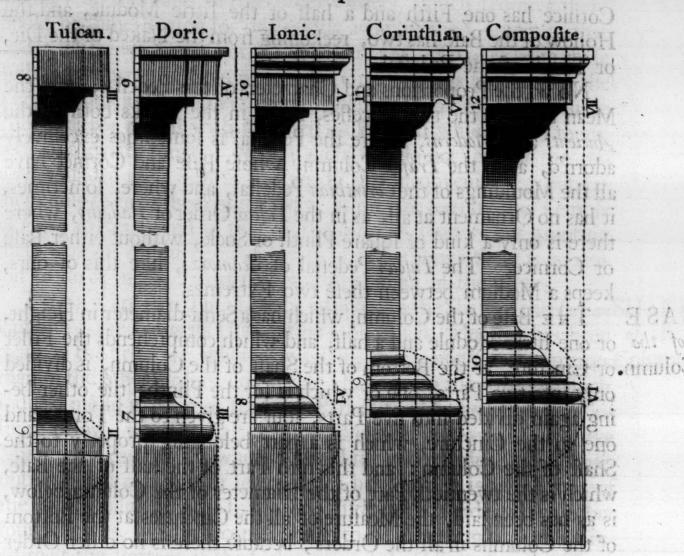
THE general Proportions of the principal Parts of this Order, have been given and explain'd in the first Part of this WORK; where it was faid that the whole Order, that is to fay, the Pedestal, Column, and Entablature, have thirty-four little Modules, of which the Pedestal has fix, the Column twenty-two, and the Entablature fix. It was also said, that the Proportions of the three Parts of the Pedestal are alike in all the Orders, where the Base has always the fourth Part of the whole Pedestal, the Cornice the eight Part, and the Socle or Plinth of the Base two Thirds of the Base it felf. It now remains that I give the Particulars of the Proportions of each Part, with what belongs to their peculiar

Character.

BASE

THE Pedestal is divided in the Tustan Order, as in all the others, of the into three Parts, the Base, the Die, and the Cornice. The Base Pedestal consists of two Parts, which are the Plinth and the Mouldings of Now as the Proportions of the principal Parts of intire Columns were before establish'd in all the Orders, having such Relation each to other, that the Heights go increasing as the Orders are more delicate; the Heights of the Mouldings of the Base and Cornice of the Pedestals do the same: for as the Orders are more delicate, the Mouldings become smaller by the Augmentation of their Number which goes always increasing, the Tuscan Base having two, the Doric three, the Ionic four, the Corintbian five, and the Composite fix. In like manner, the Cornice of the Tuscan Pedestal has three Mouldings, that of the Doric four, the Ionic five, the Corintbian fix, and the Composite seven.

To determine the Heights and Projectures of these Mouldings, I divide the Height of the Cornice, and that of the Base into a certain number of little Parts, which also go increasing according to the Delicacy of the Orders. For that Part allotted to the Mouldings of the Tuscan Base, is divided into fix Particles, the Doric into seven, the Lonic into eight, the Corintbian into nine, and the Compofite into ten. The Height of the Cornice of the Tuscan Pedestal is divided into eight, that of the Doric into nine, the Ionic into ten, the Corintbian into eleven, and the Composite into twelve; all which is explain'd by the following Figure, where the Arabic Cipher denotes the number of Particles into which the Base and Cornice are divided: The Roman Letter shews the number of Mouldings, of which each Base and Cornice is compos'd.



THAT Part of the Base of the Tuscan Pedestal, which belongs to the Mouldings, being thus divided into six little Parts, sour of them are given to the hollow, and two to the Fillet or Square under it, which are the two Members or Mouldings of this Part. The Cornice which is divided into eight Particles, has sive for a Cornice Plat-band, which serves here instead of a Corona or Drip, and of the three for a Hollow, with its Fillet, which Fillet has one of these Pedestal. Particles.

THE Projectures of the Members of the Bale, and of the Cornice of this Pedestal, as also those of all Sorts of Members in all the Orders, are taken from the fifth Parts of the little Module, as before establish'd: namely, one for the Diminution of the Column, three for the Projecture of its Base, &c. As to the Pedestals, it has been already said, that the Projecture of the whole Base with-

out

Chap. I. out the Plinth, is equal to its Height, and that the Projecture of the entire Cornice, is a small matter more than that of the Bate; all which is to be understood of all the Orders, except the Tuscan, where the Projectures of the Bate, and of the Cornice of the Pedestal are equal. As for the Projecture of the Members of which these Parts of the Tuscan Pedestal are composed; the Hollow of the Cornice has one Fifth and a half of the little Module, and the Hollow of the Base has two, reckoning from the Naked of the Die, or Trunk of the Pedestal.

Now the Proportions and Characters of this Pedestal, hold the Mean between the two Excesses, found in the Works both of the Ancients and Moderns, where the Pedestal is sometimes excessively adorn'd, as in the Trajan Column, whose Base and Cornice have all the Mouldings of the Corinthian Pedestal, and where, sometimes, it has no Ornament at all, as in the Tuscan Order of Palladio, where there is only a kind of square Plinth or Socle, without either Base or Cornice. The Tuscan Pedestal of Scamozzi, like this of ours,

keeps a Medium between these two Extremes.

THE Base of the Column, which has a Semi-diameter in Height, of the or one little Module and a half, and which comprehends the Fillet Column or Cincture, at the Bottom of the Shaft of the Column, is divided only into two Parts, one of which is for the Plinth: the other being again divided into five Parts, four are given to the Torus, and one to the Cincture, which is a part belonging properly to the Shaft of the Column: and this fifth Part of the half of the Base, which is the twentieth Part of the Diameter of the Column below, is as has been faid, the Measure of all the Cinctures at the Bottom of the Columns in all the Orders; because there is no other Order besides the Tuscan, where this Part is determin'd, and that we find this Proportion has been followed in some of the Ancients Works; and in those which differ from it, some making it a great deal larger, and others a great deal less, it is reasonable to think that the Mean is to be chosen as the best. All the other Proportions of this Base are also in a Medium, between those which the Ancients and Moderns have establish'd, which are different: for the Plinth which I make according to Vitruvius, half as high as the whole Base, is, in the Column of Trajan, less by one Minute, and, in that of Scamozzi, greater by three Minutes. The Torus, whole Height I make twelve Minutes, is in the Column of Trajan, in Pallactio and Vignola, twelve and a half, and in Serlio but ten. The Cincture or Fillet, which I make of three Minutes, is of three and a half in the Trajan Column, of five in Serlio, and Palladio and Vignola make it The Projecture of the Base, as has been but of two and a half. already mention'd, is of three Fifths of a Module.

WHAT

WHAT is remarkable in the Character of this Base, is, that Vitruvius gives the Plintha Figure very particular, by taking away its four Corners and making it round. The Moderns have not approv'd of this Manner, and I do not think it ought to be follow'd, because the Corners of the Base, answering those of the Capital, the Base would appear maim'd when depriv'd of them, on account of the Analogy of the Bases of the other Orders, which requires there should be some Reason for this taking away of the Corners in that Order where we do it: For if there were any, it would be in those Buildings where the Columns are set circularly, as they are in the Temples that are round Peripteres, where the Corners of the square Plinths agree but ill with the Step or Pedestal which bears them, because they are round. Nevertheless, we do not see that the Ancients rounded their Plinths to remedy this Inconvenience; but rather chose to take them quite away, as may be seen by the Temple of Vesta at Rome, and in that of the Sibyl at Tivoli: but granting these Corners might be taken off in some Buildings, there is no reafon to do it in the Tuscan Order, rather than in the others.

THERE are two Things to be adjusted in the Shaft of the Tuscan SHAFT Column; the first is its Diminution; of which, Mention has been of the made in the first Part, where it was said, that it ought to be greater Column. than in the other Orders, and where I have given the Reasons which induc'd me to make it of the fixth Part of the Diameter of the Column below, which is half the little Module, and amounts to five Minutes on each Side; whereas, in all the other Orders, this Diminution is but one Part of feven and a half, which is two Fifths of the little Module, that is to fay, one Fifth on each Side, which is but The fecond Thing to be determin'd is the Cinfour Minutes. Eture at the Bottom of the Column, and the Astragal at the Top; It has been faid that these Parts ought to have the same Proportions in all the Orders, and that the Cincture has a twentieth Part of the lower Part of the Column, and the Astragal an eighteenth; the Fillet, underneath it, having half as much: and that the Projectures as well of the Astragal as Cincture, are one fifth Part of the little Module, that is to fay, four Minutes beyond the Naked of the Column.

THE Capital has the same Height as the Base; and is divided in-Capital. to three Parts: one of which is for the Abacus, the other for the Ovolo or Quarter round, and the third for the Neck and Astragal under the Ovolo with its Fillet. The Character of this Capital consists in having the Abacus quite plain and without any Ogee; and that under the Ovolo there are none of those Annulets or small Squares which are in the Doric, but only an Astragal and a Fillet. The Proportions of these last are sound by parting the lower Third of the Capital into Eight; giving two Eighths of the Astragal, and

Chap. I. one to the Fillet under it, the Remainder being for the Neck. The Projecture of the whole Capital is equal to that of the Cincture at the Bottom of the Column, which is eight Fifths and a half, taken from the Middle of the Column. The Projectures of the Aftragal under the Quarter round, as also that of the Aftragal at the Top of the Column, is seven Fifths, reckoning also from the Middle.

VITRUVIUS, and most of the Moderns, who make the Diminution of the Tuscan Column very great, give very little Breadth to its Capital, making it not to exceed that of the Diameter of the

Column at Bottom. Including are let circular . mottod ent eraffw agnibl

AUTHORS neither agree among themselves, nor with the Antique about the Character of this Capital. We find in Palladio and Serlio, as well as in Vitruvius, and in the Trajan Column, the Abacus quite plain, and without an Ogee: Vignola and Scamozzi, instead of an Ogee, put a Fillet: Philander takes away its Corners and makes it round, possibly to make it like the Base, whose Plinth, Vitruvius would have to be round. The Trajan Column has no Neck, the Aftragal of the Shaft of the Column being confounded with that of the Capital; and there are only Vitruvius and Scamozzi, who put an Aftragal, with its Fillet, under the Ovolo; others, as Philander, Palladio, Serlio, and Vignola, put only a Fillet there. As to the Proportions also, they are no better agreed; for some, as Philander, take the Astragal and Fillet of the Top of the Column from the third Part of the Capital, which Vitruvius gives to the Neck and Aftragal under the Ovolo: others, as Serlio and Vignola, give all the third Part to the Neck, and take the Fillet under the Ovolo, from the second Part, which Vitruvius gives entirely to the Ovolo it felf. Others, as Palladio, leave this whole Third to the Ovolo, and put only a Fillet instead of the Astragal and Fillet, which Vitruvius affigns there. In all this Diversity, I have chosen to follow Vitruvius, whole Manner feems to me more agreeable and confonant to the Analogy and common Rule of all Capitals, which is to be a little more adorn'd, and not so plain as the Bases; for without this Astragal, which Vitruvius puts under the Ovolo, the Tuscan Capital would be nothing different from the Base.

Entabla- The Entablature having fix Modules, as has been faid, the ture. whole is divided into twenty Parts, which is likewife done in all the other Orders, except the *Doric*, as has been already noted. Six of these Parts are given to the Architrave, the Fillet whereof has one. The Freeze has also fix Parts. Of the eight which remain for the Cornice, two are given to the large Ogee which makes the first Member, and half a Part to the Fillet of the same; two and a half to the Corona or Drip, one to an Astragal with its Fillet, which is half as much as the Astragal, and two Parts to the Quar-

ter-

ter-round which supplies the Place of the great Cima. The Projectures are taken from the same fifth Parts, which determine all the others; and so three Fifths are given to the Ogee and its Fillet, reckoning from the Naked of the Freeze, seven and a half to the Corona; nine to the Astragal and its Fillet, and twelve to the Quarter-round.

THE Proportions and Character of the Entablature of the Tufcan Order are very different in Authors. As to the Proportion of the three parts which compose it, Vitruvius makes the Architrave not only larger than the Freeze, but even than the Comice. Palladio also makes the Architrave very high, and greater than the Freeze, Vignola makes it less. I have imitated Serlio, who makes the

Architrave and Freezes equal.

As to its Character, Vitruvius and Palladio allow no more than a square Beam for the Architrave; on the contrary, Scamozzi gives it excessive Ornaments, as likewise to the Cornice, where he makes as many imbellishments as in the Doric Order: He also puts in the Freeze a kind of Triglyph not channel'd. Serlio follows a Manner quite opposite, making his Cornice so pitiful, that it has but three Members, for the ten which Scamozzi puts in his. The Cornice, which I propose, and which has much Affinity with that of Vignola, keeps the middle between the Excess of Delicacy or Number of Mouldings given by Scamozzi, and that of the two great Simplicity and Plainness which Serlio affects.



The EXPLANATION of PLATE II.

five Kinds of Columns.

ter-round which supplies the Place of the great Gwa. The Proje-

A THE Tuscan Base, according to the Proportions of Vitru-

B The Base of Scamozzi, where the Plinth and the Torus are higher than those of Vitruvius, so that the Cincture is not comprehended in the Base, as it is in the others.

C The Base of Serlio, where the Cincture is much greater.

D The Capital according to Vitruvius, where the Abacus has neither an Ogee, nor Fillet; where the Ovolo takes up the whole second Part of the Capital, and where there is an Astragal under the Ovolo.

E The Capital of Scamozzi without an Astrgal.

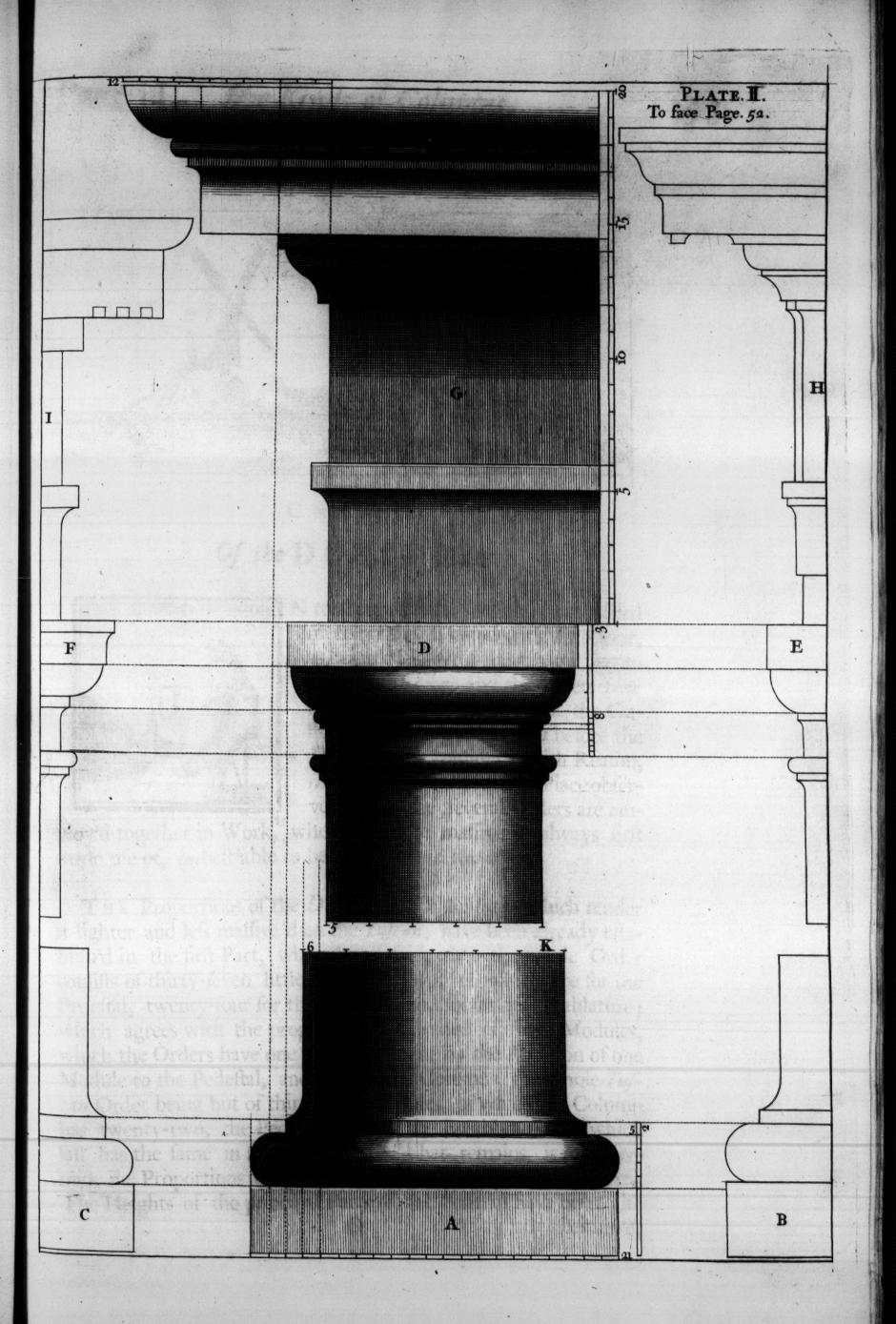
F The Capital of Serlio, where the Abacus has a Fillet, where the Ovolo possesses not the second Part of the Capital, but leaves Room for a Fillet under it, and where an entire Third is given to the Neck of the Capital.

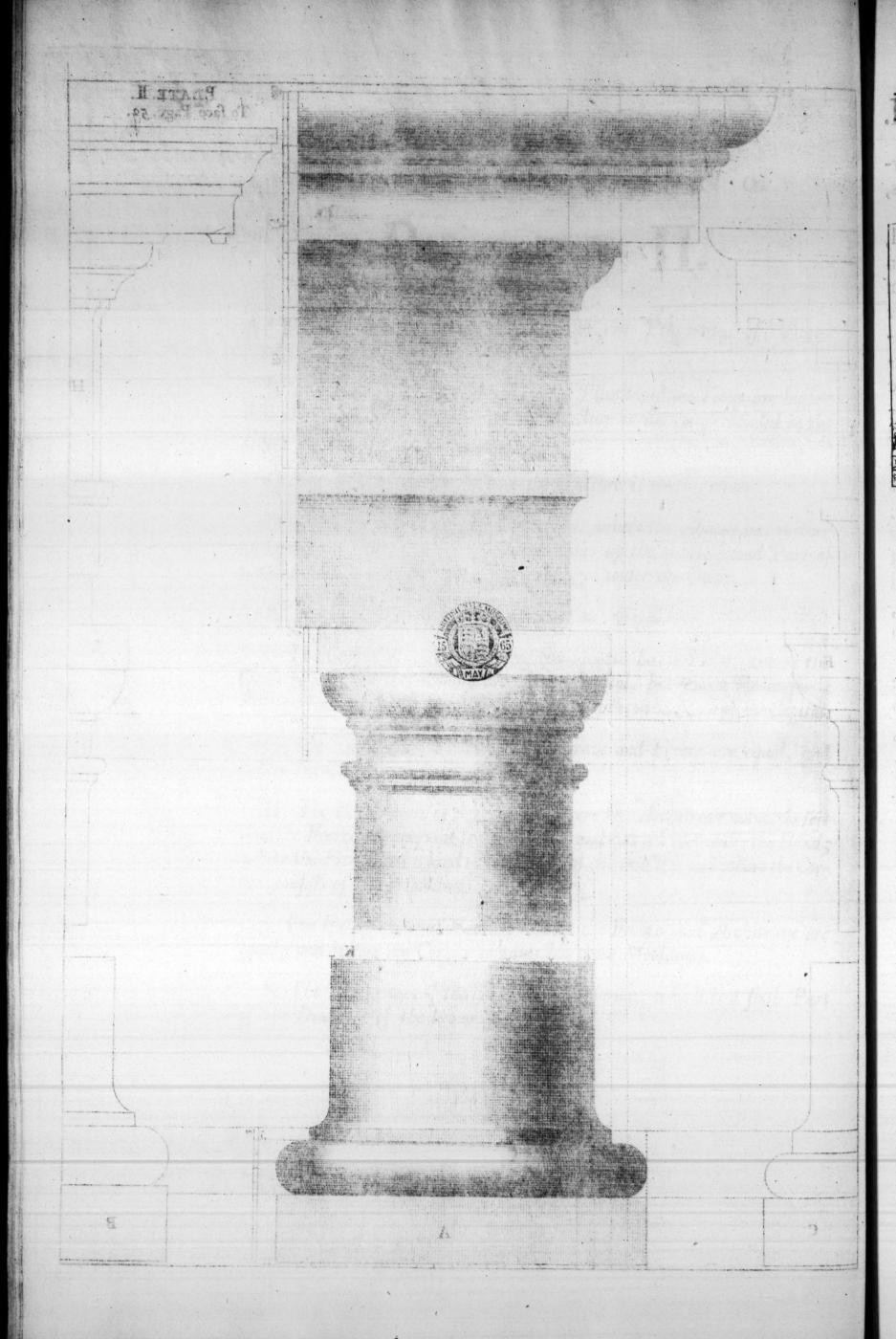
G The Entablature where the Architrave and Freeze are equal, and where the Cornice consists of six Mouldings.

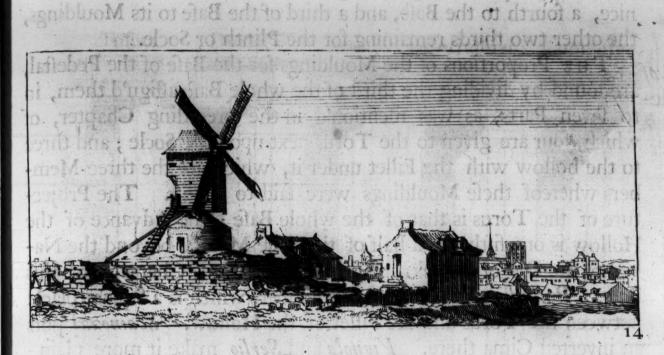
H. The Entablature of Scamozzi, where the Architrave which is less than the Freeze, is composed of two Faces, and has a Fillet under the Band; where the Freeze has a kind of Triglyph not channell'd; and where the Cornice consists of ten Mouldings.

I The Entablature of Serlio, where the Freeze and Architrave are equal, and where the Cornice contains but three Mouldings.

K The Diminution of the Shaft of the Column, which is a fixth Part of the Diameter of the lower Part thereof.







CHAPAIL aftertained, by allowing one eighth Part of the Whole to the Cor-

CHAP II.

Of the DORIC Order.

N treating of the Orders, it were indeed more natural to begin with the Doric, as being the most Ancient, and that to which the Tuscan and the others owe their Rise and Origine: But the Custom of handling the Tuscan before the Doric, is yet consistent with Reason, on account of the Rank and Place observed when the several Orders are em-

ploy'd together in Work, where the more massive is always sirst made use of, as best able to bear and sustain the others.

The Proportions of the Doric Order in general, which render it lighter and less massive than the Tuscan, have been already established in the first Part, where 'twas said, that the whole Order consists of thirty-seven little Modules, seven of which are for the Pedestal, twenty-sour for the Column, and six for the Entablature; which agrees with the progressional Advance of three Modules, which the Orders have one above another, by the Addition of one Module to the Pedestal, and two to the Column: the whole Tuscan Order being but of thirty-sour Modules, of which the Column has twenty-two, the Pedestal six, and the Entablature six, which last has the same in all the Orders. What remains, is to determine the Proportions and particular Characters of these three Parts. The Heights of the principal Parts of the Pedestal have been also ascertain'd,

CHAP. II. ascertain'd, by allowing one eighth Part of the Whole to the Cornice, a fourth to the Base, and a third of the Base to its Mouldings, the other two thirds remaining for the Plinth or Socle.

THE Proportions of the Mouldings for the Base of the Pedestal, BASE of the Pede- are found by dividing the third of the whole Base assign'd them, in to feven Parts, as was mention'd in the preceding Chapter, of stal. which, four are given to the Torus next upon the Socle; and three to the hollow with the Fillet under it, which are the three Members whereof these Mouldings were said to confist. The Project ture of the Torus is that of the whole Base; the Advance of the Hollow is one fifth and a half of the little Module beyond the Na-Authors differ in the Character of this ked of the Die or Trunk. Base. Palladio gives it a fourth Member, which is a Square plac'd between the Torus and the Fillet of the Hollow. Scamozzi puts an inverted Cima there. Vignola and Serlio make it more plain; I have followed them, as most fuitable to the Order which of itself is plain: and, as Laffign'd but two Members for the Mouldings of the Base of the Tuscan Pedestal, I allow three to the Doric, and continue the same progressive Augmentation in the other Orders, increasing the Number of the Members, as the Orders advance in Delicacy.

CAP of THE Cornice or Cap of the Pedestal, which is divided into nine the Pede-Parts, has a Hollow with a Fillet thereon, which bears a Drip crown'd only with a Square: The Drip has five of these nine Parts, stal. and its Square one. The Projecture of the Hollow with its Fillet, is one fifth and a half of the little Module, beyond the Naked of the Die; that of the Drip is of three, and that of its Square is of three and a half. The Character of this Cornice is different among Authors: Palladio and Vignola give it five Members, and Scamozzi fix: Serlio makes it plainer, allowing it but four Members; and I have imitated him in that, because it agrees with the Proportion which this Order should bear to the others, according to the pro-

> care Order being but of thin - sage Modules, of which the Colores has recenty-two, the Penet of its, and the Establature fix, which

> The Heights of the principal Parts of the Petalial bare been allo

greffive Augmentations before explain'd.

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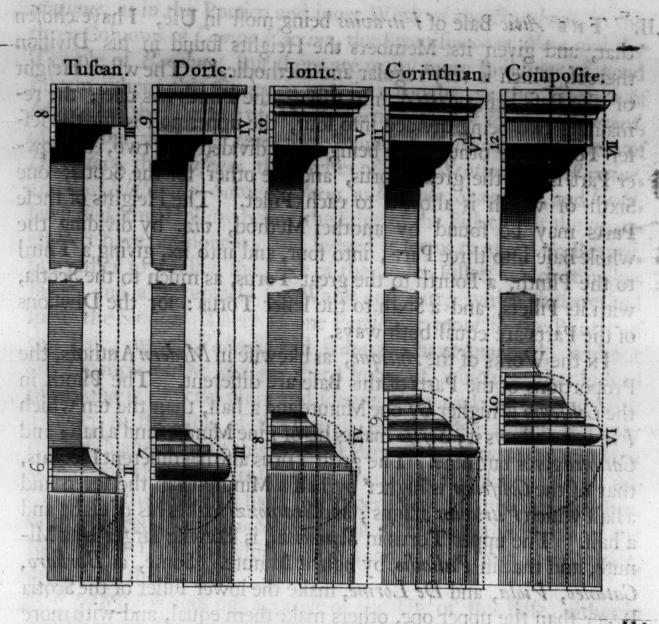
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Antique



VITROVIUS gives no Base to the Doric Column, and says that the BASE principal Difference between the Doric and Ionic Orders, is, that of the the Column of the latter has a Base. Thus we find it in the The-Column. atre of Marcellus where the Doric Column has no Base; on the other hand, the Doric Order of the Colifeum has a Base, though differing from that which most of the Moderns give to this Order, which is that Vitruvius calls the Attic Base, and whose Proportions he has describ'd. Hence it is that we find three Sorts of Bases in the Doric Order: The first is the Attic Base of Vitruvius, which has a Plinth, a large Torus below, a leffer above, and a Scotia between them: The second is the Base of the Doric Order of the Colsseum which has neither the leffer Torus nor Scotia, but only a fort of blunt inverted Cima, between the Cincture at the Foot of the Shaft, and the large Torus. The third is still more plain, having no more on the Plinth than a large Torus and an Astragal, so that in this Base, as in the Tuscan, the Cincture at the Foot of the Column's Shaft, makes part of the Height of the Base, which in all the other Orders ought to have the Semi-diameter of the Column below, without including this Cincture.

THE

that, and given its Members the Heights found in his Division thereof, which is very regular and methodical. The whole Height of the Base being parted into three, the Plinth has one; the remaining two being divided into sour, the uppermost is for the lesser Torus; the other three being again divided into two, the lower Part is for the great Torus, and the other for the Scotia, one Sixth of which is allow'd to each Fillet. The Heights of these Parts may be found by another Method, viz. by dividing the whole Base into three Parts, into sour, and into six, giving a Third to the Plinth, a Fourth to the great Torus, as much to the Scotia, with its Fillets, and a Sixth to the lesser Torus: for the Divisions

of the Parts are equal both ways.

In the Works of the Antique, as likewife in Modern Authors, the Proportions of the Parts of this Base are different. The Plinth in the Colifeum is higher by one Minute and a half, than the ten which Vitruvius allows it; Serlio makes his of nine Minutes and a half; and Cataneo gives but nine. The great Torus also has different Heights, that of the Colifeum is higher by half a Minute than the feven and a half which Vitruvius affigns; and Scamozzi makes his of eight and a half. The upper Torus in Scamozzi, is likewise larger by a Minute, and that in Palladio by half a Minute. Some, as Barbaro, Cataneo, Viola, and De Lorme, make the lower Fillet of the Scotia larger than the upper one, others make them equal, and with more Reason in my Opinion; an Inequality here not being so necessary, as in the Scotias of the Bases of the other Orders, where the Fillets touch, one a Torus, or a Plinth, and the other an Astragal, which being Members of a very unequal Thickness, require that the Fillets which are contiguous to them, should be also of a different Size, but it's otherwise in the Attic Base, where the Difference between one Torus and the other is inconfiderable.

THE Projectures of the Mouldings of this Base are regulated by the Division of the Module into five Parts, of which, as has been said, three give the utmost Extent of the Bases of Columns, in all the Orders: the first of these gives the Projecture of the Cincture at the Foot of the Shaft, the second bounds that of the upper Torus, and the third, that of the lower Torus and Plinth. For the Projectures of the Scotia, the middlemost of these three Parts is again divided into three, taking one for the upper Fillet, two for the under Fillet, and three for the Depth of the Hollow of the Scotia.

AUTHORS are sufficiently agreed upon the Character of this Base, except as to the Turn which some give the Cavity of the Scotia, which they hollow and sink down below the upper Edge of the lower Fillet. This we find practis'd in some Buildings of the Antique,

Antique, as in the Portico and inner Work of the Pantheon, in the three Columns of Campo Vaccino, the Frontispiece of Nero, and the Temple of Bacchus: But there are many more Buildings of good Esteem where this Cavity is not so wrought, as the Theatre of Marcellus, the Temple of Manly Fortune, that of Vesta, of Concord, of Faustina, and of Peace; the Basilic of Antoninus, the Baths of Diocletian, the Colifeum, the Arches of Titus, Septimius, Constantine, and the Goldfmiths. Some Moderns, as Vignola, Scamozzi, and Viola, have funk this Hollow below the Edge of the Fillet, but the greatest part have not done it; and indeed it seems to afford no Beauty, but rather to weaken the Edge of the under-Fillet, which it makes sharp, and a Receptacle for Water and Dirt, which destroy and spoil the Stone. There is one Particular more in the Plinth of this Base, which Palladio and Scamozzi have practic'd, without any Example of the Antique that I know of, which is, that instead of making it directly plum and square, they make it descend with a Sweep to the Noie of the Cap of the Pedestal, which is really to abolish and destroy this essential Part of the Attic and Corinthian Base. for though it is true, that in some Buildings, as in the Colifeum, the Pedestals have the upper Part of their Caps cut thus. with a Sweep; yet this Sweep is not taken from the Plinth of the Base of the Column, which remains intire, but from the Cornice, or Cap of the Pedestal.

VIGNOLA does not approve of the Use of this Base, either in the Doric, or Corinthian Orders, but thinks it altogether improper, although the Ancients us'd it at least in the Corinthian Order, as in the Temples of Vesta, of Peace, of Faustina, in the Frontispiece of Nero, in the Basilic of Antoninus, in the Porch of Septimius, and in the Arch of Constantine. The Base which this Author gives the Doric Order, is that of the third sort beforemention'd, where there

is but one Torus with an Aftragal.

What is particular in the Shaft of the Doric Column, is its SHAFT Flutings, which ought not to exceed the Number of twenty, nor of the be cut to deep as in the other Orders, where they are hollowed to Column an entire Semi-circle; a fourth, or even a fixth Part, being fufficient for these. Besides, here is no Space lest between the Flutings, but a bare Ridge or Angle, made by the two curve Lines which form the Cavity. To draw these Flutings, the Periptery of the Column being divided into twenty equal Parts, describe a Square, whose Side is equal to one of these Parts; from the Center of this Square, draw the arch'd Line, which makes a Quarter of a Circle from one Corner of the Square to the other. To make these Flutings still shallower, instead of a Square, describe an equilateral Triangle, the Vertical Angle of which shall be the Center for the Curve-

CHAP.II. Curve-line. The First Way, which is after Vitruvius, is most in Use. Scamozzi likes neither of these Sorts of Flutings, as not accounting them graceful: however, they are much in Use, and Vitruvius says they are particular to the Doric Order: He also affirms, that instead of Flutings, they sometimes make twenty Cants, which they leave quite flat, without any Cavity. There are but few Examples of these canted Columns, nor can they have a good Effect, it being impossible, but that Angles so blunt as those made on the Periptery by the Lines of two Sides, each of which has but the twentieth Part of the Circumference of the Circle, should appear confus'd and disagreeable, through the Difficulty, there is, of making the Separation of the two Faces sufficiently visible and di-On this Account it is, I prefer the Flutings of Vitruvius, whose Cavity is describ'd by the Center of the Square, before those made from the Point of the Triangle; because the former being deeper, the Angles of the Flutings are more acute, and the Flutings, by consequence, more distinct and conspicuous.

Capital.

THE Heights of the Members of the Capital are found by parting its whole Height, which is half the Diameter of the Column below, into three as in the Tuscan, giving one to the Abacus; one to the Ovolo, with the three Annulets beneath, which are in the place of the Astragal in the Tuscan Capital; and leaving the other third Part entirely to the Gorgerine or Neck; whereas, in the Tuscan, the Ovolo possesses one entire Third, and the Astragal and Fillet under it, are taken out of the part allowed the Neck. I have imitated Vitruvius, whom most of the Moderns have also followed. Palladio, Scamozzi, and Alberti prescribe other Proportions: Alberti makes the whole Capital near half as high again as Vitruvius, and gives also the principal Members, Proportions quite different from his. Palladio and Scamozzi, though they alter not the Height of the entire Capital, yet they enlarge that of the Abacus, and lessen that of the Neck. Both the one and the other have Precedents in the Works of Antiquity; for, at the Colifeum, the whole Capital is eight Minutes and three Quarters higher than that of Vitruvius; In the Theatre of Marcellus, it is only three Minutes higher: but, in the latter, the Proportions of the Members, with respect to each other, are more different from those of Vitruvius, than those of the Colifeum are, the Abacus being much greater in Proportion, and the Quarter-round much less.

THE Heights of the leffer Mouldings are also found by dividing and subdividing into Three: for, the whole Abacus being divided into three, the upper Part is given to the Cima or Ogee, and this being again divided into three, one is allowed to the Fillet, the other two for the Moulding. So likewise that part between the A-

bacus

bacus and Neck, being divided into three, two are given to the Quarter-round; and the third being subdivided into three; each of the Annulets have one of them.

THE Projectures are determined, as in the Tuscan, by Fifths of the Module; that of the whole Capital having three, from the Naked of the Column at the Top. The first of these being divided into sour, one is given to each of the Annulets: the second limits the Ovolo; and the third being also divided into sour, the first is for the Projecture which the Square of the Abacus makes beyond the Quarter-round, and the three other direct the Parts of the Ogee.

THERE are Instances of opposite Excesses given the Projecture of this Capital in that of the Coliseum, and Alberti: for, in the former, the Projecture is of five Parts, ours has but three, and that

of Alberti has no more than two.

THE Character of this Capital is different among Authors, in that of the Colifeum there is an Ogee instead of the Annulets, which Scamozzi has also followed; others, as Palladio, Scamozzi, Vignola, Alberti and Viola, have put Roses under the Corners of the Abacus. and in the Neck of the Capital. One may reckon, as belonging to the Character, the Projecture of the whole Capital, which Alberti and Cataneo have made extremely small, and which, in the Colifeum, is excessively large; this retrenching and enlarging, being a thing that will infallibly give Offence, when one is never fo little accuftom'd to see Capitals made after the ordinary Proportion, which is thirty-seven Minutes and a half in Viruvius, reckoning from the middle of the Column; for that of the Colifeum extends to fortyfeven and a quarter; and Alberti and Cataneo make it but thirtytwo and a half: Bullant allows it forty, Palladio thirty-nine, Vignola and Viola thirty-eight: Those, who with us, have followed Vitruvius, are the Theatre of Marcellus, Barbaro, and Serlio.

THE Entablature in the Doric Order, is not divided into twen-Entablaty Parts, as in the other Orders, but into twenty-four, of which ture. fix are given to the Architrave, nine to the Freeze, and as many to the Cornice, including the Member that runs immediately over the Tryglyph, which Vitruvius calls its Capital. As to the Proportions of the Architrave and Freeze, which are those given by Vitruvius, and which have respect to the Diameter of the lower Part of the Column, whereof the Architrave has half which makes the Doric Module, and the Freeze a Module and a half; all the Modern Architects have followed them, tho' we find they are not strictly observed in the Antique: For, in the Coliseum, the Architrave has fifteen Minutes too much; in the Ruins of Albano, and in the Baths of Diocletian, cited by Mons. Chambray, the Architraves are also greater than in Vitruvius, but the Difference is only one

CHAP.II. or two Minutes. As to the Cornice, it is not so high in Varuvius, nor in the Theatre of Marcellus, where it has seven Minutes and a half less than we here give it; but that of the Coliseum is much greater, having ten Minutes more.

Architrave.

The Architrave being divided into seven Parts, one is given to the List or Band on the Top: under which are plac'd the Drops that seem to hang from a small Square: the Drops and Square together, have a fixth Part of the Height of the Architrave; this sixth being divided into three, one is given to the small Square, the two others to the Drops. The Extent of the Square and Drops breadthwise, is one Module and a half; this Breadth is parted into eighteen, whereof three are given to each of the Drops, which, are six in Number, so that the upper part of the Drop has one of these Parts, and the lower Part something less than three, because there ought to be a little Interval between the Bottom of the Drops.

THE Character of the Doric Architrave is very different in the Antique, and amongst Authors: That which has been describ'd, is of Vitruvius, and of the Theatre of Marcellus, which has been followed by Vignola, Serlio, Barbaro, Cataneo, Bullant, De Lorme, and most of the Moderns. In the Colifeum, it is otherwise, being set off with all the Members that are in the Ionic, and in the Corinthian of this Structure, having three Faces and an Ogee above, but no Drops. In the Ruins of Albano, and the Baths of Diocletian, it has but two Faces, but they are separated by Mouldings, as in the Corinthian Order, and under the upper Ogee there are Drops, Palladio, Scamozzi, Alberti, Viola, and several other Moderns, have followed this Manner, in giving the Architrave two Faces, but they do not separate them by Mouldings, and the Drops are under the Plat-band, as in Vitruvius. There is yet some Difference in the Figure of the Drops, which some make round as the Frustum of a Cone; but, the most usual Way, is to make them square or piramidal; the round ones being referved for the under Part of the Mutules,

Freeze.

THE Freeze has nine of the twenty-four Parts of the whole Entablature, which make a Module and a half, of those I call Doric, or mean Modules, and two Modules and a Quarter of our little ones: It is generally adorn'd with Triglyphs, which are a Doric Module in Breadth, and are plac'd right over the Drops, which are on the Columns, and in the Spaces between the Columns, by Distances equal to the Height of the Triglyphs, and of the Freeze; which makes the Spaces square; these Spaces are call'd Metops,

and

Part II. five Kinds of Columns.

and are adorned with Bassorelievos of Trophys, Basons, Sculls of Oxen, and other Things. The Triglyphs have two Channels, or Gutters, funk from the upper Part to the lower, in their middle, and two half Channels on their Corners: these Gutters are so wrought as to make a right Angle. To perform which, the whole Face of the Triglyph being divided into twelve Parts, two are given to each of the Channels, one to each Half-channel, and two to each of the Interstices or Spaces between, which Viruvius calls the Shanks. The Projecture of the Triglyph from the Naked of the Freeze, ought to be one of these Parts and a half. Vignola, who allows it but one, makes it apparently too little, because the Gutters, having two Parts in Breadth, their Depth must be one Part to make a right Angle; now the Sinking and Depth of the Channel, according to Vignola, being equal to the Projecture of the Triglyph, the Half-channel, whose Depth is equal to that of the whole one, descends to the very Freeze; which it ought not to do; it being necessary, that, below the Half-channel, the Triglyph should still have some Thickness left. This Thickness, in Palladio, is but half a Minute; in the Theatre of Marcellus, it is one Minute and two Ninths, a small Matter more than I assign it, which, is a Mean between that of Palladio, and that of the Theatre of Marcellus, and is about three Quarters of a Minute.

THAT Part which is call'd the Capital of the Triglyph, is generally attributed to the Freeze of the Doric Order: but, being a Moulding, (a Thing not usual for Freezes to have) I think it should be reckoned among the other Mouldings of the Cornice: For the Projectures, which this Moulding makes over the Triglyphs of the Freeze, do no more argue it to belong to the Freeze, than the Mouldings which cap the Corbels that are in a Freeze, where, such as accompany their Projectures, are not counted part of the Freeze, but of the Cornice, these Mouldings generally taking up all that Part under the Corona, which is an essential Part of the Cornice.

THE Space left for the Cornice which is equal to that of the Cornice. Freeze, being nine Parts, the first is for the Capital of the Triglyph; the five Parts next above, are for the Hollow, Mutule, Ogee and Corona; the three last are for the great Cymaise, and for the Ogee that is over the Corona. To have these Mouldings more particularly; the second and third Part being divided each into sour, which makes eight Particles; the lower five are given to the Hollow, and the fixth to its Fillet: The sourth Part, with the two Particles which remain of the third Part, are for the Body of the Mutule.

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CHAP.II. Mutule. The fifth Part being also divided into four Particles, the two lowest are given to the Ogee, without a Fillet, which caps the Mutule. The fixth Part, with the two Particles which remain of the fifth, are for the Corona. The leventh Part, being also divided into four Particles, the three lowest are given to the Ogee next on the Corona, with its Fillet; and lastly, the ninth, being partied into two, one is given to the Fillet, or Square of the great Cymaise, which takes up the Remainder to the Ogee, which crowns the Drip. This Division of the Doric Cornice, which seems confused and obscure in Discourses is very clear and intelligible in the Figure, for all the Heights of the Mouldings are regulated by two Divisions only; to wit, by that of the whole Cornice into nine Parts, and that of each Part into sour.

UNDER the Mutule, are cut thirty-fix Drops, in fix Rows of Six each. It has been already mention'd, that these Drops, of the Sossition of the Cornice, should be round, and shap'd like small Cones, whose Points, or Tops, are sunk into the Under-bed of the Corona, or Mutule: The Mutule has a hollow Groove, wrought only on the Fore-edge, like that which is made under the Corona of the lonic Cornice.

THE Character of this Cornice is three-fold: there is one very plain, as that of Palladio, Serlio, Barbaro, Cataneo, Bullant, and De Lorme; where there are neither Mutules nor Dentels. There is another, more compounded, having Dentels; as that of the Theatre of Marcellus, of Scamozzi, and of Vignola. The third is still more fo, having Mutules, but no Dentels. I have chosen this last, on account of the Mutules following the Designs which Alberti, Vignola, and Pyrrbo Ligorio have given us, as being conformable to forme very ancient Works, whose Fragments they found: And because the Mutules are, according to Virrious, essential Parts of the Doric Order, whereas the Dentels are particularly appropriated to the Ionic. I make the great Cymaife with an Ogee, and not with an Hollow, as 'tis held to have been in the Theatre of Marcellus, and as Vignola and Viola have done; because the Hollow is weaker, and more lubject to be broke than the other; it being against reafon, that an Order, whose Property is to be massive and strong, should have Members more tender than the more delicate Orders: and, herein I have followed Palladio, Scamozzi, Serlio, Barbaro, Caranco, Albern, Bullant, and De Lorme : If any one has a mind to make it a Hollow, because some are of Opinion, 'tis that which Viruvius calls the Doric Cymaife, he may do it, keeping the fame Proportions which were given for the great Cymaife, allowing no

Part. II. five Kinds of Columns:

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more to the Fillet, or Square of the Hollow, than half of one of the nine Parts, and giving what remains between that and the Upper-bed of the Ogee of the Corona, to the Curve of the Hollow. Over the Capital of the Triglyph, where Vitruvius would have a Doric Cymaife, I have put a Hollow, or half Scotia, as Palladio, Viola, and Bullant have done; and for the foremention'd Reason, namely, that the Hollow is the Doric Cymaife; I find two other Sorts of Mouldings plac'd here; in the Theatre of Marcellus 'tis an Ogee, and Vignola makes it of a Quarter-round; that which inclines me to make it a Hollow, is the Authority of Barbaro, who says that the Hollow is the Doric Cymaise.

The third Manner of cutting the Shaft of the Dorc Cohern,

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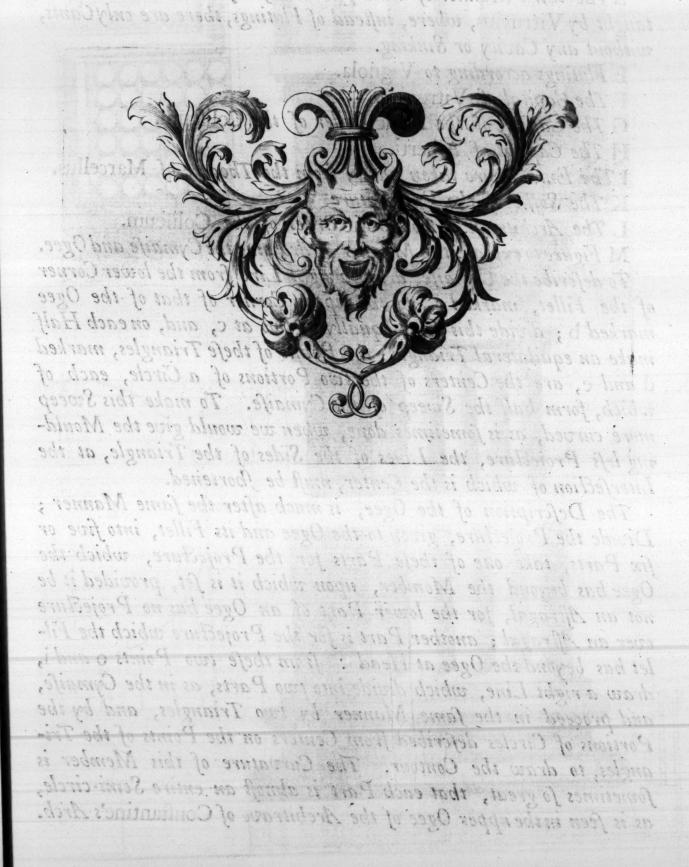
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In Chambelling, or Flutings, the according to Victorius.



more to the Fillet, or Square of the Hollow, than half of one of the nine for MOIT ANATION OF The Up-

Over the Capita Thiglyph, where Vitracius, would have a Donic Cymail, The purity A hairs A as Palladio, Viola, rand Buluar Land done; and she denied on Realon,

THE Base that Vitruvius calls Attic, which is used for and Figurela makes it of the Doric Order.

namely; that the Hollow is the Doric Cymaife; I and two other

B The Base of the Doric Order in the Colifeum. Of Smith

C The Base of the Doric Order after Vignola.

D Channellings, or Flutings, cut according to Vitruvius.

A The third Manner of cutting the Shaft of the Doric Column, taught by Vitruvius, where, instead of Flutings, there are only Cants, without any Cavity or Sinking.

E Flutings according to Vignola.

F The Capital of Vitruvius.

G The Capital of the Doric Order of the Colifeum.

H The Capital of Alberti.

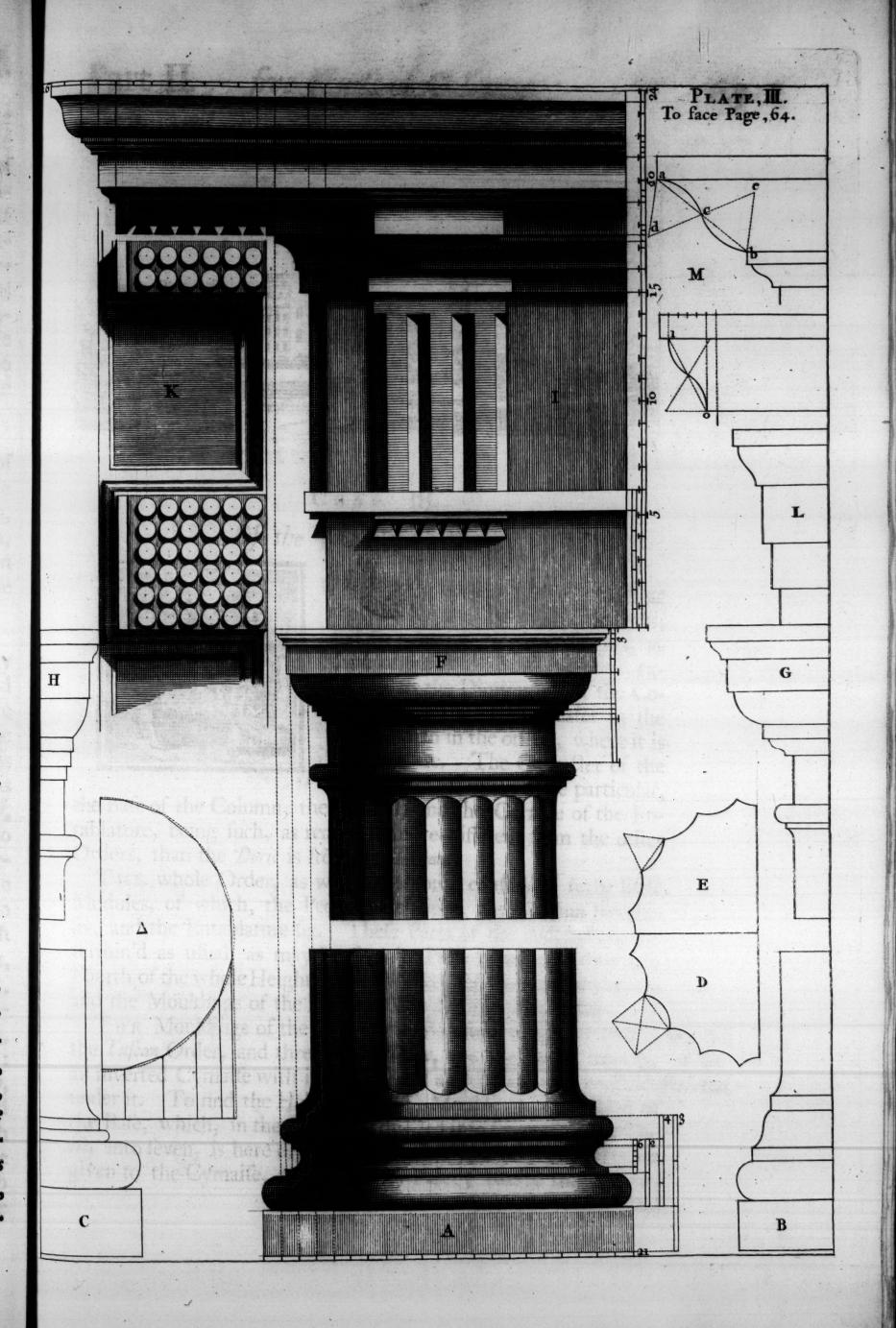
I The Entablature taken partly from the Theatre of Marcellus.

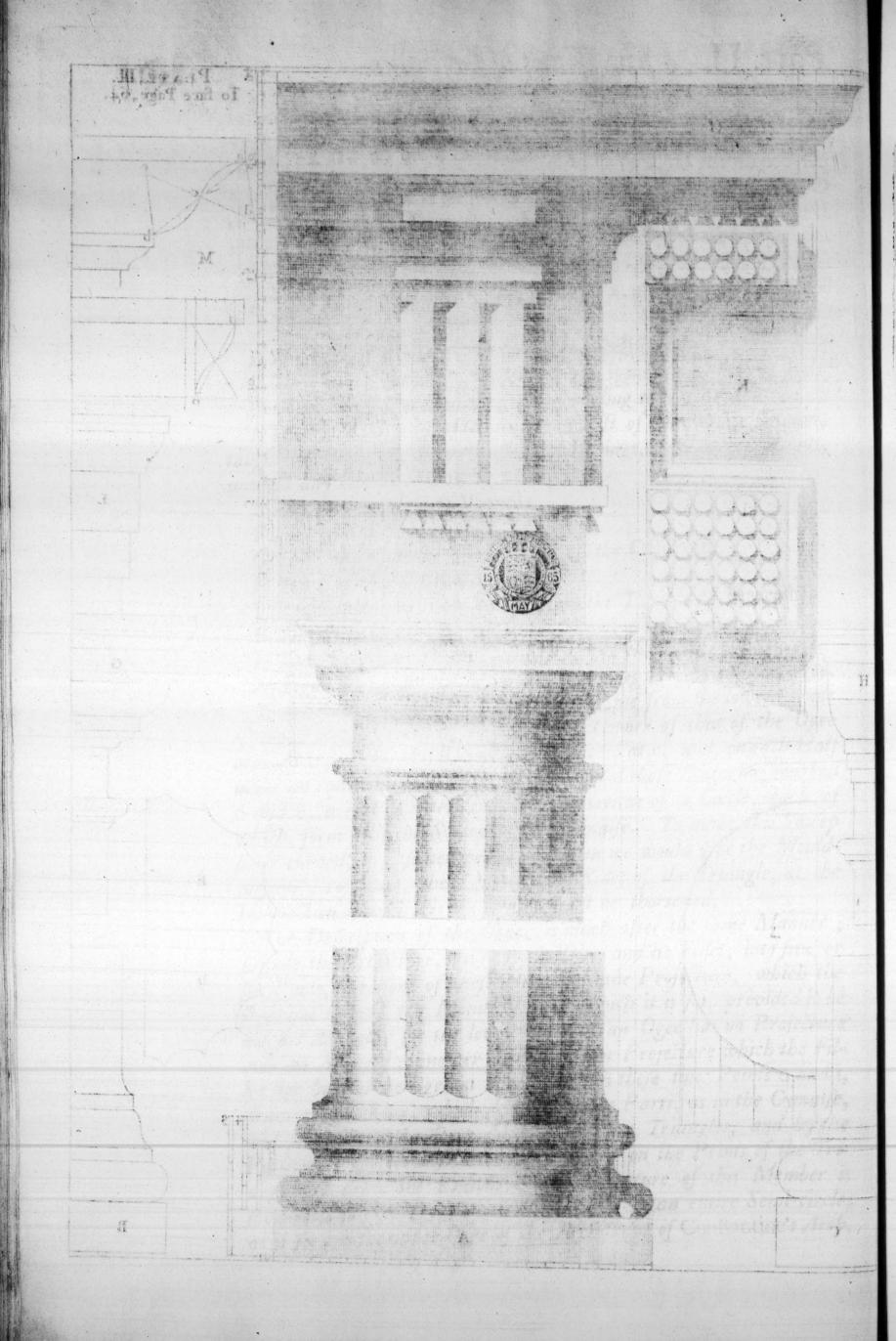
K The Soffit of the Entablature.

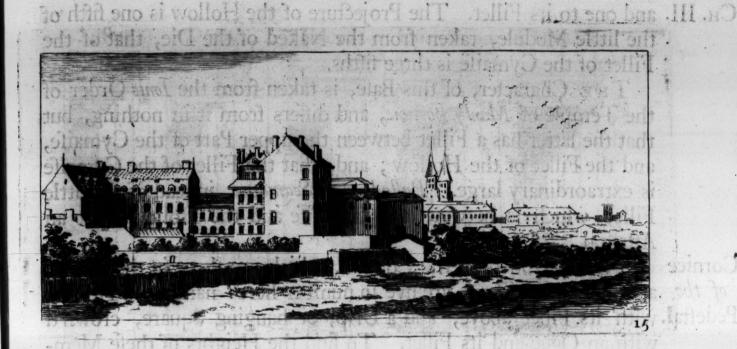
L The Architrave of the Doric Order of the Colifeum.

M Figure to explain the Manner of drawing the Cymaise and Ogee. To describe the Cymaise, draw a right Line from the lower Corner of the Fillet, marked a, to the upper Corner of that of the Ogee marked b; divide this Line equally in two at c, and, on each Half make an equilateral Triangle; the Points of these Triangles, marked d and e, are the Centers of the two Portions of a Circle, each of which, form half the Sweep of the Cymaise. To make this Sweep more curved, as is sometimes done, when we would give the Moulding less Projecture, the Lines of the Sides of the Triangle, at the Intersection of which is the Center, must be Shortened.

The Description of the Ogee, is much after the same Manner; Divide the Projecture, given to the Ogee and its Fillet, into five or fix Parts, take one of these Parts for the Projecture, which the Ogee has beyond the Member, upon which it is set, provided it be not an Astragal, for the lower Part of an Ogee has no Projecture over an Astragal; another Part is for the Projecture which the Fillet has beyond the Ogee at Head: from these two Points o and i, draw a right Line, which divide into two Parts, as in the Cymaife, and proceed in the same Manner by two Triangles, and by the Portions of Circles described from Centers on the Points of the Triangles, to draw the Contour. The Curvature of this Member is sometimes so great, that each Part is almost an entire Semi-circle, as is seen in the upper Ogee of the Architrave of Constantine's Arch.







CHAP. III.

Of the IONIC Order.



HE Proportions of the Ionic Order, bear the same Relation to them of the Doric, and the other more delicate Orders, as those of the Tuscan do to the Doric, except as to the Diminution of the Column, which is much greater in the Tuscan, than in the others, where it is always alike. The Character of the Ionic Order, is much more particular,

the Base of the Column, the Capital, and the Cornice of the Entablature, being such, as render it more different from the other Orders, than the *Doric* is from the *Tuscan*.

THE whole Order, as was faid before, confifts of forty little Modules, of which, the Pedestal has eight, the Column twenty-fix, and the Entablature fix. These Parts of the Pedestal are determin'd as usual, as may be seen in Plate I. the Base having a Fourth of the whole Height of the Pedestal, the Cornice one Eighth, and the Mouldings of the Base one Third of the whole Base.

THE Mouldings of the Base of the Pedestal, which are two in BASE the Tuscan Order, and three in the Doric, are sour here: namely, of the an inverted Cymaise with its Fillet, and a Hollow, with its Fillet Pedestal. under it. To find the Heights of these Mouldings, the Third of the Base, which, in the Tuscan, is divided into six, and, in the Doric, into seven, is here divided into eight: sour of these Parts are given to the Cymaise, and one to its Fillet; two to the Hollow,

CH. III. and one to its Fillet. The Projecture of the Hollow is one fifth of the little Module, taken from the Naked of the Die, that of the

Fillet of the Cymaise is three fifths.

THE Character, of this Base, is taken from the Ionic Order of the Temple of Manly Fortune, and differs from it in nothing, but that the latter has a Fillet between the upper Part of the Cymaife, and the Fillet of the Hollow; and, that the Fillet of the Cymaife is extraordinary large. Palladio and Scamozzi, instead of the little Fillet, which is between the Cymaife and the Hollow, put an Aftragal.

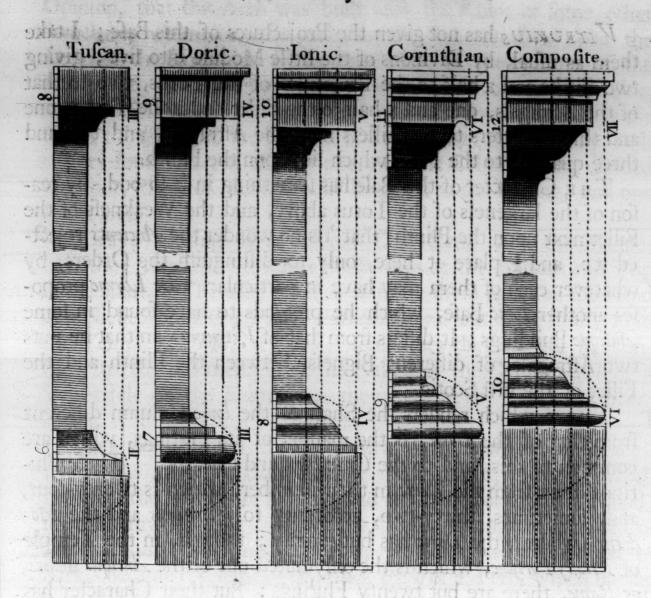
Cornice

THE Members of the Cornice, which are three in the Tuscan, of the and four in the Doric, are five in number here: namely, a Hollow Pedestal with its Fillet above, and a Drip, or hanging Square, crown'd with an Ogee and its Fillet. To find the Heights of these Members, divide that of the whole Cornice into ten Parts, as it is divided into nine in the Doric, and eight in the Tuscan: two of these Parts are given to the Hollow, and one to its Fillet; four to the Drip, two to the Ogee, and one to its Fillet. The Projecture of the Hollow is one fifth and a half of the little Module, taken from the Naked of the Die, that of the Drip is three; and that of the Ogee and its Fillet, is four.

> THE Character of this Cornice has no Agreement either with that of the Antique, or the Moderns: In the Temple of Manly Fortune, it consists of ten Members, which make it strangely confus'd: and one may fay, that the Cornices of Palladio and Scamozzi are also too full of Members for the Order; those that they prescribe for the Corinthian and Composite, not having more than they allow

this.





VITRUVIUS describes a Base for the Ionic and Corinthian Columns, BASE which most of the Moderns use only for the Ionic, and which is found of the in none of the Ionic Works that remain of the Ancients, who always Column. gave it the Attic Base: Some of the Moderns, as Alberti and Viola, give it the Corinthian Base, and only sollow Vitruvius, in that they give, as he does, the same Base to the Ionic and Corinthian Columns.

The Proportions of this Base, according to Vitruvius, are sound by dividing the whole Height of the Base into three; one of which is given to the Plinth, as in the Attic Base; the Remainder being divided into seven Parts, three are given to a Torus, which is at the upper Part of the Base, what remains, is again divided into two, and each of these two Parts into ten others, of which, two are for a Fillet under the Torus, sive for a Scotia, one for the lower Fillet of the Scotia, and two for an Astragal, which is accompanied with another Astragal of the same Bigness, and with another Scotia, having the same Dimension and the same Fillets as the former, the greater Fillet being upon the Plinth.

VITRU-

CH. III. VITRUVIUS has not given the Projectures of this Base; I take them as usual, by Divisions of the little Module into five; giving two Fifths and a half to the Projecture of the Torus, two to that of the Astragals, one and a half to the Fillet under the Torus, one and three quarters to the Fillets next the Astragals, and two and

three quarters to the Fillet which lies upon the Plinth.

THE Character of this Base has something in it so odd, by reason of the largeness of the Torus above, and the Weakness of the Fillet next upon the Plinth, that 'tis no wonder the Ancients rejected it: and I place it here, only to distinguish the Orders, by whatever each of them may have in particular. De Lorme proposes another Ionic Base, which he pretends to have found in some Antique Buildings: It differs from that of Vitruvius, in that he puts two Astragals, of different Bigness, between the Plinth and the Fillet of the first Scotia.

SHAFT THAT which renders the Shaft of the Ionic Column different of the from that of the Doric, is the manner of its Flutings, which are Column.common to this, and to the Corinthian and Composite. These Flutings

tings differ from the Doric in their Number, which is twenty-four, and, sometimes, thirty-two, according to Vitruvius and the Moderns, whereas the Doric has but twenty; though, in the Temple of Manly Fortune, which is the only fluted one of the Antique Ionics, at Rome, there are but twenty Flutings: But their Character has still fomething more particular, they not being funk shallow, as in the Doric, but having the usual Depth of the entire Semi-circle; for there are few Columns like those of the Pantheon, where the Flutings are hollowed less than the Semi-circle, or like those of the Temple of Jupiter Fulminans, where they are funk deeper. In some Buildings, the lower Third of the Flutings is half fill'd up, as it were by a Staff, or thick Rope, which makes them call'd cabled Columns, that have this kind of Flutings. Sometimes, instead of Ropes or Staves, the Bottom of the Flutings is only fill'd up near the Edge of the Side, as it is in the Columns within the Pantheon: but, as these Ways of filling the Flutings, are found in very few Works, one may affirm, that they ought to be but feldom put in Practice, and Reason directs they are not to be made use of, but when Columns are fet upon the Level of the Pavement, and not when they are rais'd upon Pedestals, or in second Orders; though, in the Arch of Constantine, the Columns that are set upon the Pedestals are cabled; because this filling up is for no other Purpose, than that the Sides might not be too much weakned by the Flutings, and that they might not be broke by every Blow which their standing low exposes them to; for, as to the Example of Constantine's Arch, there can be little Authority in that, it being the general Opinion,

Opinion, that this Arch was built with the Ruins of some other Structure, where 'tis very probable the Columns stood upon the Level of the Pavement. The Proportion of the Hollow of the Flutings, to the List between them, which is what we call the Side, is not perfectly determin'd, but the mean Proportion is to give the Side a third Part of the Breadth of the Fluting: that is to say, each twenty-sourth Part of the Periphery of the Column being divided into sour, three of them should be given to the Fluting, and one to the Side.

THESE Flutings have different Characters, as to the Manner how they terminate towards the Sweeps at the Bottom and Top of the Shaft. The most usual, is to make them round as the Head of a Niche: Sometimes these Extremities are cut quite strait, as in the Temple of Vesta, at Tivoli; sometimes they are cut just contrary to the sirst mention'd, the Naked of the Column making a Semi-circle on the Fluting, as they were at the Tuteles at Bourdeaux.

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The Ionic Capital confifts of three parts: namely, an Abacus, Capital. which has no more than an Ogee and its Fillet; a Rind, which produces the Volutes or Scrouls, and an Ovolo, or Quarter-round; for the Astragal, that is under the Ovolo, belongs to the Shaft of the Column. The middle part is, by some, call'd the Rind or Bark, because it resembles the thick Bark of a Tree, which having been laid on the Top of a Vase, whose Brim is represented by the Ovolo, seems, in Drying, to be shrunk up underneath. Varuoius says, that this twirling, which the Volutes make on both Sides the Capital, represents the Locks of Hair, which turn into Rings or Buckle, on each Side the Womens Faces.

To find the Height of this Capital taken from the Top of the Abacus down to the Astragal, the little Module must be divided into twelve Parts, eleven of which are given to the whole Capital, the Abacus having three, namely, two for its Ogee, and one for its Fillet; the Rind has four, one of which is for its Rim; and the Ovolo has also four. From the Top of the Abacus, to the Bottom of the Volute, are nineteen of these twelsth Parts of the little Module.

To describe the Contour of the Volute, you must begin at the Astragal, on the Top of the Column, which should have two of the foremention'd Twelsths in Thickness, and extend to the right and lest, as much as the Diameter of the Column below. This Astragal being drawn on the Face, where the Volute is to be trac'd, a level Line must be drawn through the middle of the Astragal, and continued beyond the Extremity thereof: then, from the Top of the Abacus, let sall perpendicular to the former, another Line

CH. III. passing through the Center of the Circle, whose half describes the Out-line of the Aftragal: This Circle, which has two Twelfths in Diameter, is, by Vitruvius, call'd the Eye of the Volute; and 'tis within this Circle, the twelve Points are to be plac'd, which ferve for Centers to the four Quarters of each of the three Revolutions that compose the Scroul. To find these twelve Points, in the Eye of the Volute, describe a Square, whose Diagonals, are one in the Horizontal Line, and the other in the Plum-line, interfecting each other in the Center of the Eye. From the middle of the Sides of this Square, draw two Lines, which divide the Square into four, and each Line being parted equally into fix, they give the twelve Points required. To describe the Volute, set the fix'd Leg of the Compasses on the first Point, which is in the middle of the inner and upper Side of the Square, and extend the other Leg to the Place where the perpendicular Line cuts that of the lower Part of the Abacus, and draw a Quarter of a Circle outwards and downwards, till it meets the horizontal Line. From this Place, having fet the fix'd Leg in the second Point, which is in the middle of the upper and outer Side of the Square of the Eye, make the fecond Quarter of a Circle, turning downwards till it meets the Plum-line, and from thence, having plac'd the fix'd Leg in the third Point, which is in the middle of the lower and outer Side of the Square of the Eye, draw the third Quarter of a Circle, turning upwards and inwards till it cut the horizontal Line. From thence, having fet the fix'd Leg in the fourth Point, which is in the middle of the lower and inner Side of the Square of the Eye, describe the fourth Quarter of a Circle, turning upwards and outwards, till it touch the Plum-line. From thence, having plac'd the fix'd Foot in the fifth Point, which is under the first, tending towards the Center, draw the fifth Quarter of a Circle, and, in the same manner, the fixth from the fixth Point, which is below the second, and the seventh from the seventh Point, which is next the third; and thus going on from Point to Point in the same Order, you form the twelve Quarters, which make the ipiral Circumvolution of the Scroul.

The Thickness of the Edge, or Border, which is on the Face of the Volute, and which, under the Abacus, is one of those twelve Parts, as has been said, ought to go still narrowing, by little and little, till it comes to the Eye: this Border is rais'd above the Volute, one twelfth Part of the Breadth of the Rind, which was four of the Twelfths beforemention'd: Now, as the Rind grows narrower and narrower, and this Border diminishes proportionably, its Elevation ought also to diminish, and this Diminution is determin'd by the Breadth of the Rind of which, it is always the twelfth Part. This Border is describ'd by a second Draught, in the same Manner

garring

THE Projecture of the Ovolo is equal to its Height; which is four Twelfths. This Member is carv'd with an Ornament, commonly call'd an Egg, because of its oval Shape. The Greeks call'd it Echinos, because they thought these Ovals represented Chesnuts half inclos'd in their Shell, which is covered with Prickles, like those of a Hedghog, call'd Echinos in Greek; sive of these Eggs are cut in each Face of the Capital, of which there are but three that appear entire, the two that are near the Volutes, are partly cover'd by three small Husks, which issue out of a Leaf, whose Stalk lyes

upon the first Circumvolution of the Scroul.

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The Volutes hitherto describ'd, are on the Face of the Capital in Front, and on that behind it; the Faces, on the Sides, are of another Fashion. Varavius calls this Part on the Side, the Pillows The Moderns give it the Name of Balluster, because it resembles the Cup of the Flower of the wild Pomegranate, call'd Balaustin in Greek. This Balluster is double, having a Pomegranate in the middle. Its Edges, towards the Volutes, are two Twelsths, according to Virravius; that is, the Breadth of the Eye. The Profile, or Contour of the Pomegranate, is, by the same Author, call'd the Girdle or Belt; but the Out-line of it, which he makes a Semi-circle, agrees not with what we find given it in the Works of the Antique, where it has an irregular Form not to be describ'd without Figure. This Balluster is carv'd with great Leaves, as the Pomegranes.

but explain'd in a more easy and regular Manner, agree not in every thing with the Examples left us by the Antients and Moderns: Its Height, which I make of eighteen Minutes, as it is in the Colifern, and which come near the Proportion Vitruvius gives it, is twenty-one Minutes and two Thirds in the Theatre of Mancellus, and twenty one and a Half in the Temple of Manly Fortune. The Echinus, or Ovolo, which I make of the fame Height as the Rind of Bark, is larger than all the rest of the Capital, in the Temple of Manuellus. The Volute, whose Height I make twenty-fix Minutes and a Half, is but twenty-three and a Quarter in the Temple of Manly Fortune, twenty-

CH. III. twenty-four and a Half in the Colifeum, and twenty-fix and a Quarter in the Theatre of Marcellus. The Breadth of the Volute, which I make of twenty-three Minutes and a Third, as in the Colifeum, is twenty-five and a Quarter in that of Manly Fortune; and twentyfour in the Theatre of Marcellus. The same Diversity of Proportions, is found among the Modern Authors, the Ovolo, which is greater than the Rind in Palladio, Vignola, Barbaro, Bullant, and

De Lorme, being equal to it in Alberti and Scamozzi.

THE Differences of the Character, are, first, that in the Antique, as well as in some of the Moderns, as Vignola, Serlio, and Barbaro, the Eye of the Volute answers not the Astragal on the Top of the Column, as most of the Moderns make it, following Viruvius, who, having faid, that from the Center of the Eye, to the Bottom of the Volute, there are three Parts and a half, he then adds, that there are three below the Astragal for the Descent of the Volute: for, from thence, it follows, that the Eye of the Volute, and the Aftragal, are in the same Place, since the Dimension of the Eye, being one Part, as it is, there is then a half Part from the Center to the under Part thereof, which makes the Space, between the Aftragal, and the Bottom of the Volute, less by half a Part, than that which is from the Center of the Eye.

In the fecond Place, the Face of the Volutes, which usually make a strait Flat, is somewhat curv'd and convex in the Temple of Manly Fortune, so that the Circumvolutions go advancing outwards; as they do in the Composite Order of the Arches of Titus, and Septimius,

and in the Temple of Bacchus.

twenty-

THIRDLY, in this Volute of the Temple of Fortuna Virilis, the Border, or Rim of the Scroul, is not only a plain Sweep, as ufually, but the Sweep is accompanied with a Fillet. Fourthly, the Leaves which invest the Balluster, are sometimes long and narrow, either in Water-leaves, as in the Theatre of Marcellus, or elfe rafled y small, as Palladio and Vignola make them: Sometimes they ar after the Manner of the Olive-leaves, which are cut in the Corintoran Capital; as they are in the Temple of Manly Fortune. Fifthly, on the angular Columns of the Temple of Manly Fortune, the two Faces of the Volutes are join'd together at the outward Corner, and the Ballusters meet in the same manner at the inner Corner, which was done to hinder the Capitals of the Columns which make the Return, from having their Faces on the Front and Back-part of the Temple, different from those which are on the Sides; namely, one with Volutes, the other with Ballusters; for, by this Means, they appear with Volutes on all Sides. The Volute, whole Height I makestwenty-fix Minutes and a Half.

is but twenty-three and a Quarter in the Temple of Manhy Fortune,

THIS

THIS Difference of Faces in the Ionic Capital, which renders it inconvenient, has oblig'd the Moderns, following Scamozzi, to change it, in making its four Faces alike, by taking away the Balluster, bending all the Faces of the Volutes, and hollowing them inwards, as they are in the Composite Order. There are, however, two Things may be censur'd, in the Capital of Scamozzi; One is, that the Volute is of an equal Thickness, whereas, in the Ionic of Fortuna Virilis, and every where in the Composite Capitals, from whence this Volute was taken, it goes, enlarging itself, downwards, very gracefully. The other is, that he causes the Volute to spring from the Echinos, or Ovolo, as from a Vale, after the Manner of the Composite of the Moderns, who have introduc'd this Change, contrary to what we find in most of the Composite Works of the Antique, where the Bark passes over the Ovolo, and under the Abacus, quite strait, and turns only at its Extremities, which form the Volute: for, without that, the Abacus of the Ionic Capital, which is only an Ogee, appears too thin a Member, and feems to need Support from the Bark, as it has in the Ionic Volute of the Ancients. I think it may also be objected, that the Architects, who make use of the Capital of Scamozzi, have chosen that Manner of the two, he proposes, which seems least suitable to the Ionic Order; for this Author makes the Abacus two Ways; one of which, is with a Sweep, as the Volute, as it is in the Composite Order; the other is left strait, and perfectly square, as it is in the Ancient Ionic, and in that of the Temple of Manly Fortune, where, the Abacus does not extend itfelf on the Corners of the Volutes, there being only a Leaf, which coming from under the Corner of the Abacus, turns itself down upon the Volute, and descends, till it comes just against the Eye of the Scroul; and still more to distinguish this Order from the Composite, there is no Flower between the Volutes.

Of late Years, Sculptors have added an Enrichment to the *Ionic* Capital, which *Scamozzi*, who new modell'd it, had not inferted; which is the making Festoons; that, together with the small Husks of the Volutes, spring from the Flower, whose Stalk lies upon the first Circumvolution of the Scroul: and, it seems, that they would, thereby, represent the Curls of Hair, hanging down on both Sides of the Face, which *Vitruvius* would have signified by the Volutes: for, it may be said, that the Volutes represent, rather the Locks of Hair twisted up, and, that the Festoons bear more Re-

femblance to the Buckles of Hair in Curl.

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'T is farther remarkable, that there is an Opinion amongst Architects, that the Volutes of this Temple are more oval, and broader sideways, than they are commonly made, which is not true; for, although the Capitals of this Building are different, and most

the

CH. III. of them imperfect, it is certain, that those which are finish'd, are far from having the Volute oval, breadthwise; having it rather so up and down, being twenty-fix Minutes and a half high, and twentythree Minutes and a half wide; whereas, in the Theatre of Marcellus, where they are but twenty-fix Minutes and a Quarter high,

they are twenty-four wide.

THE Entablature has the usual Height of two Diameters of the Entablalower Part of the Column, or fix little Modules. It is also divided as in all the other Orders except the Doric, into twenty Parts; of which, the Architrave has fix, and the Freeze as many, the eight, which remain, being for the Cornice. The Proportions of the three Parts, whereof this Entablature is compos'd, are different in Authors. Vitruvius makes the Freeze greater than the Architrave; wherein, Vignola and De Lorme have imitated him. On the contrary, in the Temple of Manly Fortune, and in the Theatre of Marcellus, the Freeze is less than the Architrave; and this Proportion has been followed by Palladio, Scamozzi, Serlio, Barbaro, Cataneo, and Viola. Alberti, whom I follow herein, keeps the Middle, and makes the Freeze and Architrave equal: He, also, gives eight Parts to the Cornice, of which, the Architrave and Freeze have each fix, which are the same Proportions I give these Parts.

Architrave.

To find the Heights of the Members of the Architrave, divide it into five Parts; giving one to the Cymaile, compos'd of an Ogee and its Fillet: the Remainder being divided into twelve Parts, the first Face of the Architrave has three, the second four, and the third five. The Projectures are determin'd by fifth Parts of the little Module; fo that a Quarter of one of these Fifths, is given to the Projecture of each Face, and an entire Fifth to the Ogee with its Fillet; which makes together, one Fifth and a Half, for the Projecture of the whole Architrave.

THESE Proportions are not found in all those Works we take our Examples from; the Cymaife is less in Vitruvius than we make it; he hollows it but the feventh Part of the Architrave, whereas I make it the fifth, as it is in the Theatre of Marcellus because, in the Antique, it is sometimes much greater, being in the Colifeum, two Ninths, and, in the Temple of Manly Fortune, two Fifths. The Moderns, also, differ some from others, Serlio and Bullant make it little, according to Vitruvius, and others make it large, as Palladio, Vignola, Alberti, and Viola.

THE Character is also different, in that there are Astragals, fometimes, inferted between the Faces, as Palladio has done. the Temple of Manby Fortune, there is but one, and that is not between the Faces, but in the Midft of the fecond Face. puts one under the Cymaife, as in the Corinthian Order. I think the Plainness that Vitruvius gives this Architrave, in cutting off the Astragals, suits best with this Order, which should not have those Ornaments that are peculiar to the more delicate; though Varuvius makes no fuch Difference between these two Orders, which he distinguishes, from each other, only by their Capitals; the Corinthian, according to these Heights, borrowing, sometimes the Entablature of the lonic Order, iometimes that of the Doric: For, if Architects, fince Viruous, have added Ornaments to the Corinthian Order, they have done it, in my Opinion, with more Reason, than those who would give these very Ornaments to the Ionic Order. The Faces are sometimes made leaning backwards, and the Soffit of their Projecture not direct, but rising up before, as in the Temple of Manly Fortune; and 'tis pretended this is done, that the Projectures, and Heights of the Members, may appear otherwise than they really are. Vitruvius would have all the Faces of the Members in Entablaments, incline forward, pretending that this Inclination makes them appear plumb. We find, however, in the Antique, that the Faces are oftner made leaning backward than forward. But all those Things are consider'd in a seperate Chapter, where I discourse of the Change of Proportions. However, my Opinion is, that all that should appear plumb and level, ought to be really made so; and, in all the Members, of what Order foever it be, I govern myfelf by this Rule.

THE Freeze, small and swelling, as Vitruvius has made it, is not Freeze. found practifed in the Antique, unless it be in the Baths of Diocle-

fian; and most of the Moderns have shewn dislike to it.

THE eight Twentieths of the whole Entablature, which are al- Cornice lowed to all the Cornices, except that of the Doric Order, regulate of the the Height of this, and that of all its Members, which are Ten in Entabla-Number. The first, which is an Ogee, has one of the Twentieths; the fecond, which is a Dentel, has one and a half; the third is a Fillet, which has one Fourth of a Part; the fourth is an Aftragal, which has as much; the Fifth is a Quarter-round, which has one Part; the fixth is the Corona, which has one and a half; under the Corona there is a Drip, whose Depth is one Third of a Part; the seventh Member is an Ogee, which has half a Part; the eighth is a Fillet, which is a Quarter of one; the ninth is the Cymaife, which has one Part and a quarter; the tenth is the Lift, or Square of the Cymaife, which has half a Part.

THE Projectures are govern'd by Fifths of the little Module, of which, twelve are given to that of the whole Cornice: the Ogee has one, taken from the Naked of the Freeze; the Denticle three; the Ovolo, or Quarter-round, with the Astragal and Fillet under it, four and a half; the Corona eight and a half; the Ogee, with its Fillet, nine and a half; and the Cymaife twelve.

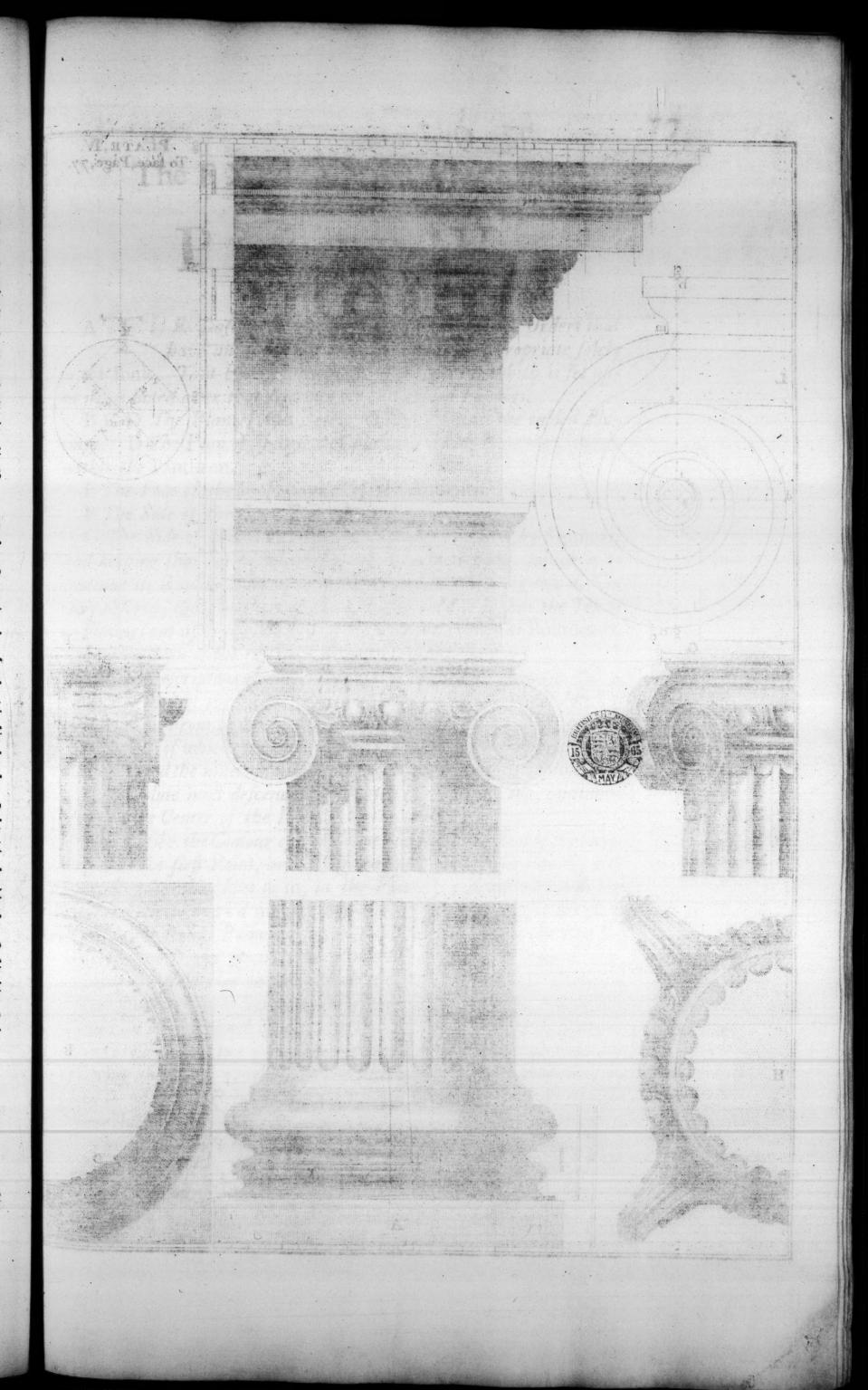
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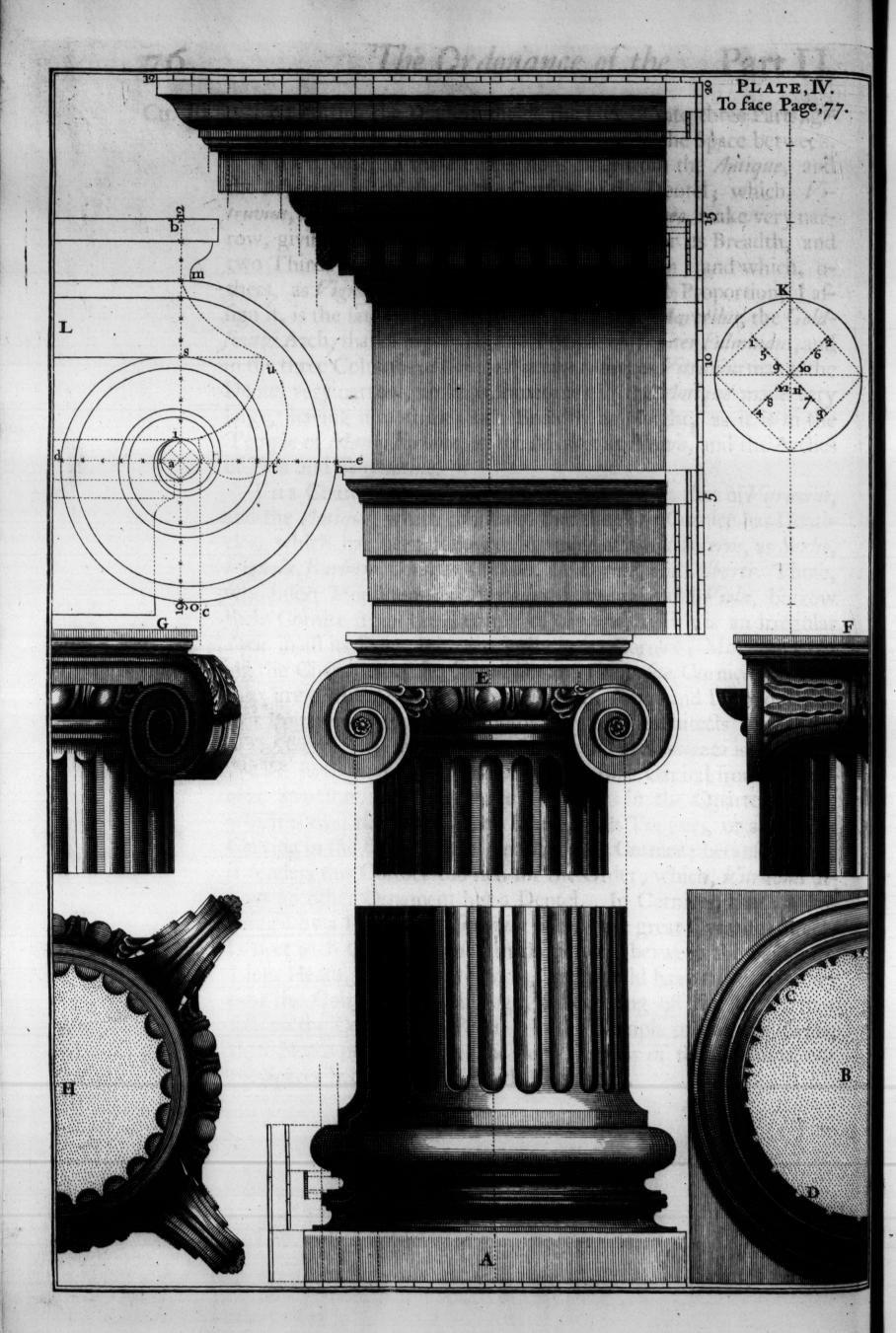
CH. III. FOR cutting the Dentel, divide the Height into three Parts, giving two of them to the Denticle, and one to the Space between.

THAT, wherein these Proportions differ from the Antique, and the Moderns, is, chiefly, in the Cutting of the Dentel; which, Vitruvius, and some Moderns, as Barbaro, and Cataneo, make very narrow, giving but half the Height of the Dentel for its Breadth, and two Thirds of the Breadth of the Space between; and which, others, as Vignola and Serlio, make larger. The Proportion, I affign it, is the same with that in the Theatre of Marcellus, the Gold-smiths Arch, that of Septimius, the Temple of Jupiter Fulminans, and in the three Columns of Campo Vaccino: for, as Vitruvius makes the Dentel very narrow, so it is sometimes in the Antique made very large, having almost as much Breadth as Height, as it is in the Temple of Manly Fortune, at the Market at Nerva, and the Arches

of Titus and Constantine.

THE Character I have here made Choice of, is that of Vitruvius, and the Antique, which confifts in that the Ionic Cornice has Denticles, which has been follow'd by most of the Moderns, as Serlio, Vignola, Barbaro, Cataneo, Bullant, De Lorme, and Alberti: Those, who insert Modillions, as Palladio, Scamozzi, and Viola, borrow their Cornice from the Temple of Concord, which is an irregular Ionic in all its Parts, but principally in its Cornice; Modillions being the Character of the Corinthian and Composite Cornices, as Mutules are of the Doric, and Dentels of the Ionic; and I cannot think that Imitation ought to be approv'd, which Architects have made of the Cornice of the Temple of Concord, as Scamozzi is commended for having taken the Model of his *Ionic* Capital from this ancient Structure. Neither have I cut Eggs in the Quarter-round, which is over the Dentel, nor Leaves with Tongues, or any other Carving in the Ogees of the Architrave or Cornice; because I think it renders this Cornice too rich for the Order; which, Vitruvius allows no other Ornament but a Dentel. In Cornices, that are not cover'd by a Pediment, Vitruvius puts in the great Cymaife, directly over each Column, and, in the Spaces, between the Columns, Lions Heads, at equal Distances, and would have those, that are over the Columns, cut through, for carrying off the Water that falls on the Cornice and Roof. In the Temple of Fortuna Virilis, these Heads neither answer the Perpendicular of the Columns, nor the Spaces between them, with Regularity.





The EXPLANATION of

PLATE IV.

A THE Base which Vitruvius gives to all the Orders that have any, and which, the Moderns appropriate folely to the Ionic. That Piece of the Shaft of a Column, which is fet upon it, is fluted after that Manner we call cabled Flutings.

BCD The Plan of this Base. C The Plan of the cabled Flutings. D The Plan of that fort of Fluting, which is on the Columns

within the Pantheon.

E The Face of the Ionic Capital of the Antients.

F The Side of the same Capital.

G The Side of the Modern Ionic Capital, reform'd by Scamozzi and keeping that Form, which I think it ought to have, which is to continue its Rind or Bark upon the Vafe, without entring into it. You may observe, that the Part of the Column join'd to it, has the Top of its Flutings cut after the Manner of those at the Tuteles at Bourdeaux.

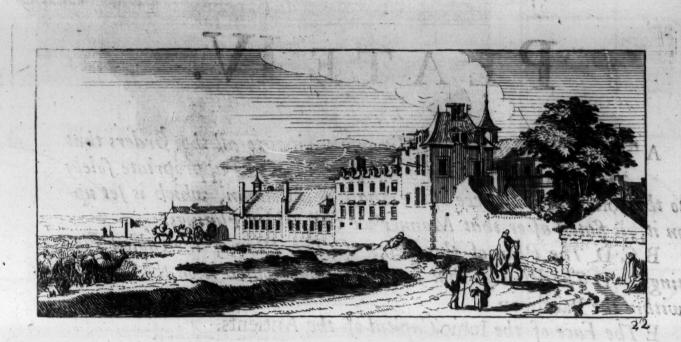
H The Plan of the reform'd Modern Capital. L The Description of the Antique Ionic Volute.

K The Eye of the Volute, Shewn at large, which, in the Volute L, is mark'd a. From a, to b, is the Height of the little Module, parted into twelve, of which, the eleven from i, to b, make the Height of the Capital; and the nineteen taken from b, to the bottom, determine how far the Volute must descend; d, e, is the horizontal Line, continued

through the Center of the Eye.

To describe the Contour of the Volute, set the fixed Foot of the Compasses on the first Point, answering that markdi, in the Eye K, and extending the other Foot to m, in the Volute L; draw outwards the Quarter-circle mark'd m, n. From this Place, having fet the fix'd Foot on the fecond Point, answering that mark'd 2, in the Eye K, describe the second Quarter-circle mark'd n, o; and from thence, placing the fix'd Foot on that which answers the Point 3, draw the third Quarter-circle from o to d; from thence, likewise, setting the fix'd Foot on that which answers the Point 4, draw the fourth Quarter of a Circle from d to s; and then, placing the fix'd Foot on that answering the Point 5, describe the fifth Quarter-circle mark'd s, t; and so on, from Point to Point, till you have drawn the three Circumvolutions.

The Line c, answers to the Naked of the Bottom of the Column. That which is mark'd m, u, t, gives the Out-line of the Pomegranate of the Balluster, which Vitruvius calls the Belt or Girdle.



CHAP IV.

Of the CORINTHIAN Order.



and Ionic Order, differ only in their Capitals, whose Proportion and Character have nothing alike: But we find in Structures, built fince his time, other Differences than those of their Capitals; for the Shaft of the Corinthian Column is shorter then that of the Ionic: the Base is quite different. The Archi-

Torus

gals and an Ogee. The Cornice has an Ovolo, and Modillions, which are not in the *Ionic* Order of *Vitruvius*.

B A S E In the first Part of this Treatise, where are established the Proof the portions in general, there is given to the entire Order, forty-three
Pedestal. little Modules; whereof, the Pedestal has nine, the Column twenty-eight, and the Entablament six. The proportions were also adjusted, by giving the whole Base a Quarter of the Height of the
Pedestal, and half a Quarter to the Cornice; the Zocolo, or
Plinth of the Base, having two Thirds of the whole Base, the
other Third is parted into nine; whence are taken the Heights of the
five Members, whereof this Part is composed; which are a Torus,
an inverted Cymatium, with its Fillet, and an Ogee, with its Fillet under it. The Torus has two Parts and a half of the nine; the
Cymatium three and a half, which half is for the Fillet; the Ogee
two and a half, and its Fillet half a Part. The Projecture of the

Torus is that of the whole Base; that of the Cymatium is two Fifths and three Quarters of the little Module; and that of the

Ogee, with its Fillet, is one Fifth.

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THE Character of this Base, is taken from Palladio, who has sollowed the Example of that of the Arch of Constantine, in every thing but this, that instead of the Ogee, which makes the upper Member of Palladio's Base, that has an Astragal, with a Cavetto, or small Hollow upon it. In the Altars of the Pantheon, 'tis also much the same, all the Difference being, that the Ogee there has

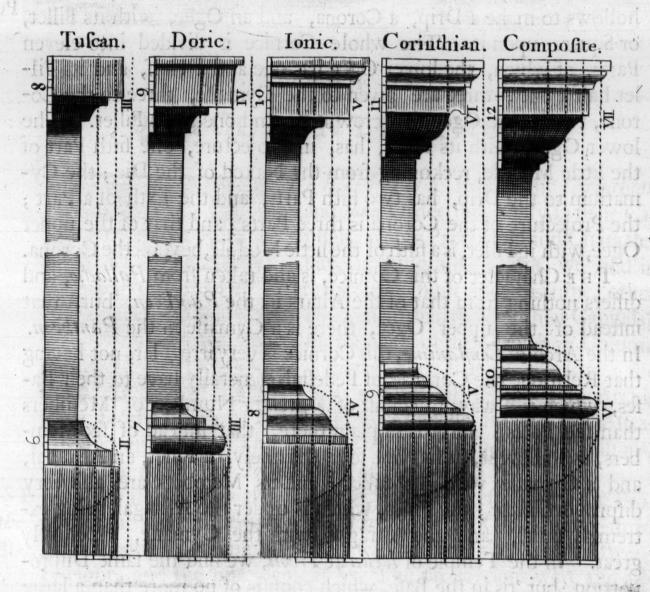
an Astragal, which supplies the Place of this Fillet.

In the Cornice, the fix Members that compose it, are an Ogee, with its Fillet; a Cymatium that rises under the Corona, which it hollows to make a Drip, a Corona, and an Ogee, with its Fillet, or Square upon it. The whole Cornice is divided into eleven Parts, of which, the lower Ogee has one and a Half, and its Fillet half a one; three are given to the Cymaise, three to the Corona, two to the Ogee that crowns it, and one to its Fillet. The lower Ogee, with its Fillet, has, in Projecture, one fifth Part of the little Module, reckoning from the Naked of the Die; the Cymatium to the Drip, has two fifth Parts, and the fixth of a Part; the Projecture of the Corona is three Parts; and that of the upper Ogee, with its Fillet, is a fifth of the little Module, beyond the Corona.

The Character of this Cornice, is also taken from Palladio, and differs nothing from that of the Altars in the Pantheon, but, that instead of the upper Ogee, there is a Cymaise in the Pantheon. In the Arch of Constantine, this Cornice is very irregular, not having that Relation, the Cornices of Pedestals generally have to their Bases, which is always to consist of a greater Number of Members than the Bases; for it is so plain there, that instead of six Members, as I allow it, it has but four; namely, a Fillet, an Astragal, and a Cymaise with its Fillet; and its Members are also very disproportionate; the Fillet, which is under the Astragal, being extremely small, and the Astragal, with the Cymaise, excessively great. In the Temple of Vesta at Tivoli, we find the same Disproportion, but 'tis in the Base, which consists of no more than a large inverted Ogee, with its Fillet, which do the Office of Base, and Zocolo to the Pedestal.

The Antient Architects, who came immediately after Virievius, BASE invented a Base for the Corinthian Column, that seems to be a of the Composition of the Artic and Ionic Base; for it has two Tores as Column. the Artic, and two Astragals, and two Scotias, as the Ionic. In this Diversity of Proportions, found in the Examples, which the Works of the Antients and Moderns give to this Base, keeping my accustom'd Medium, I take the Heights of all the Members, by Divisions

CH. IV. Divisions into Fourths, as was done in the Doric Capital by Thirds; for the fourth Part of the Semi-diameter of the Column, which is the Height of the whole Base, is the Height of the Plinth; the fourth of what remains, is the Height of the lower Torus; the fourth Part of what then remains, is the Height of the upper Torus; the fourth Part of the Remainder, is for the two Astragals in the Middle, which have each half of this Fourth; the Fourth of what remains between each Torus, and each Astragal, is for the greater Fillet of the Scotia, which ought to be next each Torus; the fourth of what then remains, is for the lesser Fillet, which should be contiguous to the Astragals; and what afterwards remains, is for the Scotias.



THE Projectures are regulated, as before, by Fifths of the little Module, so that the great Torus, as also the Plinth, has three Fifths, in Projecture from the Naked of the Column; the Astragals, and the greater Fillet of the lower Scotia, have two Fifths; the upper Torus, and the lesser Fillets of the Scotias have one Fifth, and three Qurrters of a Fifth; and the greater Fillet of the upper Scotia, one Fifth and a half.

IN

In the Proportions, and the Character of this Base, I here give, there is scarce any thing makes it different from the Antique, but the Proportions of the Scotias, which I make equal, though they are found almost always different in the Antique, that above being less than the other. But as all the Moderns make them equal, I thought I could not do amiss in following these great Masters.

WHAT is remarkable in the Shaft of the Corinthian Column, is SHAFT its Height, which, as has been faid, is less than that of the Ionic; of the because its Capital, being much higher, had the Shaft been length-Column. ned proportionably to what is done in the other Orders, the entire Column would have had too great an Augmentation of Height. As for its Flutings, all that relates to them, has been spoken to in the precedent Chapter, there being no Difference in the Flutings of these two Orders, either as to Figure, or Number, for if sometimes we find in the Amique, that the Ionic has fewer Flutings than the Corinthian, as in the Temple of Fortuna Virilis, where they are but twenty in Number, there are also Corinthian Columns that have no more, as in the Temple of the Sibyl at Tivoli.

THE Corinthian Capital is still more different from the three others, Capital. than the Ionic is from the Doric or Tuscan; for it has neither the Abacus nor Ovolo, which are effential Parts common to the Tufcan, Doric and Ionic. Here is indeed an Abacus, but altogether different from the others, having its four Faces circular and hollow'd inward, where there is a Rose on each of the four. Instead of an Ovolo, and Annulets, here is only the Brim of a Vafe, and that which is as a Neck, is very much lengthen'd, and enrich'd with a double Row of eight Leaves in each, bending their Heads outwards, from between which, arife small Stalks, from whence spring the Volutes, which have no Resemblance with those of the Ionic Capital, and which, instead of four in the Ionic, are fixteen in Number

here, four in each Face.

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FOR the Height of this Capital, add to the Extent of the whole Diameter, at bottom of the Column, one fixth Part, which makes three little Modules and a Half. This Height being parted into feven, the four lowest are for the Leaves; to wit, two for the first Row of Leaves, and two for the second. The Height of each Leaf being parted into three, the upper Part is for the Descent, which the Head of the Leaf makes on the Turn. The three Parts at top, which remain of the seven, are for the Stems, Volutes, and Abacus. This is divided into feven Parts, of which, the two upper ones are given to the Abacus, the three next to the Volute, and the two lowest to the Stem or Stalks; so that one of these two Parts is for the bowing down of the Leaves of the Stems, of which, there are two that meet and join at the Place where the Volutes come

CH. IV. come together and join, which is at the four Corners, and at the four Middles of the Capital. Under the Horns of the Abacus, where the Volutes meet, there is a small Leaf of the Acanthus, which turns back towards the Corner of the Abacus, to fill the Space which is between the Volute that descends, and the Horn of the Abacus that remains strait.

Ranges of lesser Leaves, of which they are composed, and which they have on each Side, besides the middle Leaf, which turns outwards; the lesser Leaves are again parted generally into five, and then are call'd Olive-leaves; sometimes into three, and then take the Name of Laurel-leaves. The middle Leaf, which bows its Head, is parted into eleven, which are convex outward, whereas, the others are something hollow. Above the Leaves, in the middle, there is a Flower, which shoots out between the Stems and the Volutes, like the Stalk of the Rose, which is in the Midst of the Abacus.

To make the Plan of this Capital, draw a Square equal to the Plinth of the Base, and make an equilateral Triangle, of which, one of the Sides of the Square is the Base: the Angle, opposite to this Base, is the Center, on which to describe the Sweep of the Abacus: For the cutting off the Horns of the Abacus, divide one of the Sides of the Square into ten Parts, one of these is the Breadth of the Horn on the Cant, which must be made at right Angles to

the Diagonal of the Square.

THE Proportions of this Capital are different in the Works of the Antique, and in the Writings of Architects. In the Antique, the whole Capital is sometimes a seventh Part lower, being no more than the Diameter of the Column at bottom, as in the Temple of the Sibyl at Tivoli, which agrees with Viruvius: Sometimes it is higher, as in the Temple of Vesta at Rome, and in the Frontispiece of Nero, where it has near two fixth Parts more than the Diameter of the Column. It has fometimes the same Height I give it, as in the upper Order of the Colifeum, and in the Temple of Jupiter Fulminans: Sometimes it is only a small matter lower, as in the Pantheon, in the three Columns of Campo Vaccino, in the Temples of Faustina, and Mars the Revenger; in the Porch of Septimius, and in the Arch of Constantine: Sometimes it is a little higher, as in the Baths of Diocletian. The Moderns are also divided, for some give it the same Height I do, as Palladio, Scamozzi, Vignola, Viola, and De Lorme; others, as Bullant, Alberti, Cataneo, Barbaro, and Serlio, make it low, according to Vitruvius. The Abacus, in Vitruvius, as also, in the three Columns, and the Temple of Faustina, is the feventh Part of the whole Capital; it is sometimes less, being but an eighth Part, as in the Pantheon, in the Basilic of Antonine, and the

of what I give it: Sometimes it is greater; hading even be lith or Sixth, as in the Temple of Westa at Rome, and that of the Sibyl at Twoli. The larger in the Temple of the Sibyl at Twoli.

Nor is there less Difference in the Character Winner outs the Leaves in Manner of the Acanthus, as they are in the Temple of the Sibyl at Tivoli: In the Antique, they are for the most part made as Olive-leaves rafled into five: fome divide them only into four. as in the Temple of Man the Revenger; others into three, as in the Temple of Westa at Rome: The Moderns, who make them like the Acanthus, are Serlio, Barbaro, and Cataneo. These Leaves in the Antique, are sometimes unequal in their Height, the undermost being tallest, as in the Portico, and within the Pantheon, in the Temple of Vefta at Rome, that of the Sibylat Twoli, and that of Faulina, in the Market of Nerva, in the Arch of Constantine, in the Colifeum and the Baths of Diocletian: Sometimes the fecond Range are higheft, as in the Basilic of Antoninus, and sometimes, also, they are equal, as I make them, as in the three Columns of Campo Vaccino. in the Temple of Jupiter Fulminans, and Mars Ulton, in the Frontispiece of Nero, and in the Porch of Septimius The Ribs, in the Middle of the Leaves, are very often rafled on both Sides, as in the Pantheon, in the Temples of Jupiter Fulminans, and Mars the Revenger, in the Frontispiece of Nera, in the Basilic of Antoninus, the Porch of Septimius, and the Baths of Diodletian: Sometimes they are not cut at all, as in the Temple of Vefta at Rome, of the Sibyl at Tivoli, in the three Columns of Campo Varcino, in the Market of Nerva, and in the Arch of Constantine. The first Row of Leaves, commonly belly out, towards the Bottom, but more in fome Buildings than others; this Swelling is very remarkable in the Temple of Vesta at Rome. In the Capital of a Pilaster, which remains of the Frontispiece of Nevo, and another in the Baths of Diocletian, there are more Leaves than are usually made in Pilasters; for, whereas on each Face of the Pilaster, there are commonly but two Leaves in the first Row, and three in the second, these have three in the first Row, and four in the second; and, moreover, in that of the Frontispiece of Nero, there is another Leaf rifes between the Stalks and the middle Volutes, instead of the little Flower. This Leaf is likewise in the Capital of the Temple of Westa at Those of the first Sort are within the Pambeon, in the Tempsmon

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THE Abacus is sharp at the Corners, in the Temple of Vesta at Rome, which seems agreeable to Virruvius, who mentions nothing of cutting off the Corners of the Corinthian Abacus, and speaks of them, as no more than sour in Number, which would be eight, were the Corners cut off. The Rose, which is in the Middle of

the

CH. IV. the Abacus, is also somewhat different; wirworks makes it the Thickness of the Abacus: Some have fince made it drop as low as the under Part of the Brim of the Vale, or Tambour, and it is yet much larger in the Temple of the Sibyl at Tivoli; for there it almost covers the middle Volutes; it differs, also, in its Form, being generally, a Rose compos'd of fix Leaves, reach rasted into five Olive-leaves, from the Middle of which, comes out a Sort of Fiftes Tail, wav'd and turning upwards: Thus it is in the Pantheon. in the Temple of Faustina, of Jupiter Fulminans, and of Mars the Revenger, in the Market of Nerva, and in the Baths of Diocletian. In the Temple of Vefta, it has the likeries of an Ear of Corn, instead of the Fishes Tail. In the Sibyl's Temple at Tivoli, the Rofe, which is very large, and compos'd of Leaves not rafled, has, also in its Middle, the Form of an Ear of Corn, twifted like a Screw. In the Frontispiece of Nero, there is a small Flower. In the Basilie of Antonine, and in the Arch of Constantine, the Bottom of the Rose is turned upwards, and has an Ear of Corn in the Middle. In the three Columns of Campo Vaccina, the Rofe, which is cut with Leaves of Acanthus, hangs very much downwards, and, in the Midft, has a Pomegranate, Iturning alfo downwards. In the Porch of Septimius, instead of the Rose, there is an Eagle holding a Thunderbolt. This Rose, or whatever is inserted in the Midst of the Abacus, inflead thereof, has different Projectures: It extends, sometimes, beyoud the Line which goes from one Horn of the Abacus to the other; as in the three Columns of Campo Vaccino, in the Altars of the Pantheon, in the Temple of the Sibyl, and the Bafflic of Antoninus: Sometimes it recedes a small Matter within the Line, as in the Temples of Jupiter Eulminans, that of Mars the Revenger, and in the Baths of Diocletian; and sometimes its Projecture is the same with the Line, as in the Pantheon, and in the Temple of Faustina.

THE Volutes are sometimes join'd one to the other, as in the Portico, and Inside of the Pantheon, in the Temples of Jupiter Fulminans, and Mars Ultor, &c. Sometimes they are wholly separate, as in the Temple of Vesta, in the Frontispiece of Nero, and in the Basilic of Antonine, &c. The Helices of the Volutes are ordinarily of two Manners in the Antique: Some keep twisting even to their End, in the same Course, like the Shell of a Snail; others, towards the Center, turn back again, and form, as it were, a small S. Those of the first Sort are within the Pantheon, in the Temples of Vesta and Trvoli, and in the Baths of Diocletian; the other Manner, more us'd in the Antique, is in the Porch of the Pantheon, and that of Septimius, in the three Columns of Campo Vaccino, in the Temples of Jupiter Fulminans, Mars Ultor, and that of Faustina, in the Frontispiece of Nero, the Basilic of Antoninus, the Market of Nerva,

and in the Arch of Conftantine; which, nevertheless, is not practised by the Moderns. But the Volutes of the three Columns in Campo Vaccino, are altogether particular; for those in the Middle of each Face, instead of joining at their Edge, as usual, are so interwoven, that that which above passes over the other, is continued, afterwards, under it again.

The Entablature, which is of fix little Modules, is divided, as Entablacommonly, into twenty Parts, whereof, fix are given to the Architure. trave, as many to the Freeze, and eight to the Cornice. These Proportions are different, as well in the Antique, as in Authors; for the Freeze is greater than the Architrave, in the Temple of Jupiter Fulminans, and that of the Sibyl, as also in Serlio and Bullant. It is less than the Architrave, in the Porch of the Pantheon, in the Temple of Faustina, in the Basilic of Antonine, in the Porch of Septimius, and the Arch of Constantine, in Palladio, Scamozzi, Barbaro, Cataneo, and Viola: but, within the Pantheon, the Architrave and Freeze are equal.

To find the Heights of the several Parts of the Architrave, di-Archivide each of its fix Parts into three, which makes eighteen in all; trave, three of these are given to the Ogee above, whose Fillet, or Square,

has one and a Quarter of them; the large Astragal, under that Ogee, has one Part; five are given to the upper Face; one and a Half to the simall-Ogee under it; four to the middle Face; one Half to the little Astragal under it, and three to the lower Face. For the Projectures, that of the whole Architrave has two Fifths of the little Module; the upper Face has one of these Fifths; the middle Face half a good the larger Face are favore the Nelson of the

dle Face half a one, and the lower Face answers the Naked of the upper part of the Column.

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THESE are mean Proportions, between the different Excesses of the Antients and Moderns: for the great Ogee, which I make one Sixth of the whole Architrave, has more than a Fifth, in the Portico and Inside of the Pantheon; in the Temples of Faustina and Jupiter Fulminans, in the Market of Nerva, in the Porch of Septimius, in the Arch of Constantine, in the Colifeum, and the Baths of Diocletian; but it has no more than a seventh Part in the three Columns of Campo Vaccino, and in the Temple of Mars the Revenger. The Moderns also differ as much, Palladio, Vignola, Alberti and De Lorme, giving it more than a Fifth, and Serlio, Barbaro, Cataneo, and Bullant allowing it but a Seventh.

THE Differences of the Character, are likewise very various, there being Corinthian Architraves, which instead of the Ogee above, have a Hollow, and a Quarter-round under it, as in the Temple of Peace, the Frontispiece of Nero, and the Basilic of Antoninus: Sometimes, instead of the Quarter-round, there is an Ogee under

CH. IV. the Hollow, as in the Temple of the Sibyl, and in Scamozzi. There are also Architraves that have nothing under the Ogee, nor between the Faces, as in the Colifeum, and in the Arch of Constantine; Others, where there are only Astragals, and no little Ogee, as in the Temple of Mars the Revenger; and there are some that have but two Faces, as in the Frontispiece of Nero, and in the Basilic of Antoninus: Others, which have the middle Face quite fill'd with Ornaments, as in the three Columns of Campo Vaccino.

Freeze.

WHAT is remarkable in the Freeze, is that there are some which do not rife square above the Architrave, but are join'd to it by a little Sweep. This we find practis'd in the Baths of Diocletian, and the Temple of Jupiter Fulminans. Palladio and Scamozzi affect this Way, although 'tis but rare in the Antique: and it may be faid, there is some Inconvenience in the Execution of it, by reason that the Joint, which falls between the Freeze and the Architrave, when these Parts meet square, must be made in the Midst of the Freeze, when they are join'd by this Sweep, which produces an ill Effect.

Cornice of the Entablement.

To find the Height of the Members, whereof the Cornice is compos'd, the whole Cornice is divided into ten Parts. The Members are thirteen in Number. One of these ten Parts is given to an Ogee, which is the first Member; the fourth of a Part to its Fillet, which is the fecond; the third, which is the Dentel, has a Part and a half; the Fillet, and the Aftragal which are over it, which are counted the fourth and fifth Members, are each one Quarter of a Part; the fixth, which is an Echinos, or Quarter-round, has one Part; the seventh, which is a Modillion, has two Parts; the eighth, which is an Ogee that crowns the Modillion, has half a Part; the ninth, which is the Corona or Drip, has one Part; the tenth, which is a small Ogee that crowns the Drip, has half a Part; the eleventh, which is a Fillet, has a Quarter of a Part; the twelfth, which is the great Cymaise, has one Part and a quarter; and the thirteenth, which is a Fillet, has half a Part,

THE Projectures are determin'd by Fifths of the little Module, of which, the great Ogee at Bottom, has one, taken from the Naked of the Freeze; the Dentel two; the Astragal that crowns the Dentel, two and a half; the Quarter-round three and a quarter; the Back-part, which sustains the Modillion, three and a half; the Corona nine; the small Ogee, with its Fillet, ten, and the great Cymaife twelve. As the Dimensions of all the Parts of the Corinthian Cornice, are so very different in several Works, that we find no two alike; I have taken the Proportions I affign it, from the Cornices of the Pantheon, the most approv'd Corinthian Work of all Antiquity: I have also followed the same Character throughout, except in the small Ogee, I insert between the Corona and great Cy-

maile,

maile, which we find in all the other Remains of the Antique, tho in the Pantheon, there be only a Fillet.

THERE is a great Diversity in the Character of this Cornice, as well as in the Proportions; for we find some Cornices that have no Corona, as in the Temple of Peace, the Colifeum, and the Arch of Lions at Verona, where the Modillions are plac'd immediately under the great Cymaile; others have the Corona of an excessive Bigness, as in the Frontispiece of Nero. There are some that have two Quarter-rounds, one under the Dentel, and another over it, as in the Temple of Peace. Some that have the Quarter-round under the Dentel, and the large Ogee over the Dentel, as in the three Columns of Campo Vaccino; and some where the Dentel is not cut, as in the Pantheon, the Temple of Faustina, and that of the Sibyl. Vitruvius says that Dentels ought never to be put with Modillions: but as the Member, in which the Dentels are cut, is found in most Corinthian Cornices of the Antique, it seems reasonable to restrain this Precept of Viruvius, to the cutting of the Dentel, which is, indeed, omitted in the most approv'd Works; and, in my Opinion, with great Judgment; as well because this cutting the Dentel is an Ornament peculiar to the Ionic Order, as because the two Members, between which it lies, which are a Quarter-round and a great Ogee, being usually carv'd, this Clutter of Ornaments causes a Confusion very disagreeable to the Eye. There are Corinthian Cornices without Modillions, as in the Temple of the Sibyl, and that of Faufina, and in the Porch of Septimius. There are some, whose Modillions are square, and with several Faces, as in the Frontispiece of Nero, which are the Modillions the Moderns give to the Composite Order; in others, the Modillions have no Scroul, but are quite square before, as in the Temple of Peace: Some, instead of the Leaf that covers the under Part of the Modillion, have other Sorts of Ornaments, as the Corinthian Cornice, which makes the Impost of Constantine's Arch, where there are Eagles: most commonly the Leaf which covers the Scroul is cut into Olive-leaves; but sometimes into Leaves of Acanthus, as in the three Columns, and the Baths of Diocletian. Generally, likewife, the Modillions are plac'd without any Respect to the Columns, and we seldom find them, as in the three Columns of Campo Vaccino, and in Constantine's Arch, let at such Distances, that one lies directly over the Middle of each Column. In the Market of Nerva, where the Entablature is broken over each Column, as it is in Constantine's Arch, instead of three Modillions, as are commonly over every Column, and of which one must necessarily be over the Middle of the Column, there are four, fo that there can't be one in the Middle. bus and the are Roses without Pannels, as in the Temple of Peace, and in the

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Colifern.

CH. IV. THE last Remark that remains to be made, concerning Modillions, is how they are to be plac'd in Pediments. The ordinary Practice of the Antique, is to make them perpendicular to the Horizon, there being but few Instances where they are square to the Declivity of the Pediment, as Serlio has represented them in the Arch of Verona: and 'tis certain this fo universal a Practice ought to be taken for a Rule, though Reason requires the contrary, according to the Prescripts of Varuous, who would have the Imitation of the Works of Carpentry, govern whatever relates to the Modillions and Dentels of Cornices; because they represent the Ends of those Pieces that compose the Carpentry of the Roof. For as the Modillions, which, at the Eaves, represent the Ends of Rafters, do, in the Gable Ends, where Pediments are, represent the Ends of Purlins, it is but reasonable, that the Position of the Mcdillion, in the Pediment, be fach as the Situation of the Purlin, which being plac'd on the Pediment, with a Tendency perpendicular to the Declivity of it, requires that the same Position be also given to the Modillion. Vitruvius has determin'd nothing upon this Subject, by reason he says the Greeks put no Modillions in Pediments; but made the Cornices altogether plain, as they are in the Temple of Chisi; and the Reason he alledges, is, that it could not agree with the Imitation of the Works of Carpentry: it not being reasonable, says he, to make the Representation of the Ends of Rafters in a Place where there is no fuch thing; namely, in the Gable End. But supposing Modillions to be made in a Pediment, as they cannot represent any thing but the Ends of Purlins, they ought to have no other Pontion, or Tendency, than the Purlins have: For these Reasons, Some of the Moderns place the Modillions and Dentels in Pediments, contrary to the common Usage of the Antients. The late Monf. Manford has done it with great Approbation, in the Facade of Saint Mary's Church, in the Street of Saint Anthony. of (anliantine's Arch, where there are

THE Lions Heads, which Vitravius puts in the great Cymaile, are scarce sound in any of the Antique Works: in the three Columns of Campo Vaccino, instead of Lions Heads, there are Heads of Apollo, with Rays, which are placed in the Midst of a Rose com-

pos'd of fix Leaves of Acanthus \ o o mad to a mullion sould be

In the Soffite of the Cornice, between the Modillions, there are figure Pannels that have Roles in them: the Squares of these Pannels are most commonly oblong, and seldom perfectly square, as they are in the Temple of Jupiter Fulminans, and in the Baths of Diocletian; for they are oblong in the Porch of the Pantheon, in the three Columns, and in the Arch of Constantine. Sometimes there are Roses without Pannels, as in the Temple of Peace, and in the Coliseum.

Part II. five Kinds of Columns.

89

Coliferm. Most commonly the Roses are different, and seldom alike, as they are in the Baths of Diocletian. The Volute of the Modillions sometimes extends it self beyond the Ogee that caps it, as in the Baths of Diocletian; sometimes the Volute leaves the Ogee entirely beyond it, as in the Porch of the Pantheon, the Market of Nerva, and in the Arch of Constantine; sometimes it advances halfway the Ogee, as within the Pantheon, in the three Columns, and in the Temple of Jupiter Fulminans. The Leaf, which covers the Modillion, extends, sometimes, as far as the Volute, as in the Baths of Diocletian; sometimes leaves the Volute entirely beyond it, as in the three Columns of Campo Vaccino; and sometimes advances to the Middle of the Volute, as in the Market of Nerva, the Tem-

ple of Jupiter Fulminans, and the Arch of Constantine.

But among the Moderns, we find a Cornice of a Character altogether fingular, which is that of Scamozzi, where there is no Dentel, and where the Modillions are so small, and the Projecture of the Corona fo great, that it extends beyond the Modillion more than half the Length of the Modillion, making a very large Throat, as in the Composite Order. It seems probable this Projecture beyond the Modillion, was copied from that of Diocletian's Baths, where it is, however, much less. In this Manner of Modillions, there is this Conveniency, that being small and closer together than they usually are, the Columns may be brought so near each other, that the Horns of the Abacus of their Capitals may touch, and yet the Modillions still keep their Place over the Middle of the Columns; which cannot be done in the ordinary Methods, where a confiderable Interval, between the Extremities of the Abacus of the Capitals, must of necessity be left: for this Interval is about forty-five Minutes in Vignola, fixteen in Palladio, and twelve in our Manner. And I am of Opinion that Manner is best where the Columns may be brought nearest together, by reason of the Occasion there is for fo doing, when Columns are coupled in Portico's, where they cannot be set too close. But as the Character of this Cornice is too remote from that which is generally in use, not admitting of a Dentel, which is a Part that Custom has render'd as it were estential to the Corinthian Cornice, I think it cannot well be employ'd, without taking too great a Liberty.

THE

The EXPLANATION of

PLATE V.

A THE Base invented by the Ancient Architects, that came after Vitruvius, for the Corinthian and Composite Orders, in the Members of which, the Heights are determined by Divisions from sour to sour, and the Projectures by the Division of the little Module into sive.

B The Corinthian Capital different from that of Vitruvius, as well in its Proportion, which makes it higher, as in its Character, having Olive-leaves instead of those of Acanthus, which Vitruvius gives it.

C The Plan of the Capital.

he Roles are different, and leldom a-

D The Volute, or Helix of the Capital, which turns in the Form of an S towards the Center.

E A Laurel-leaf, such as are in the Capital of the Temple of Vesta at Rome.

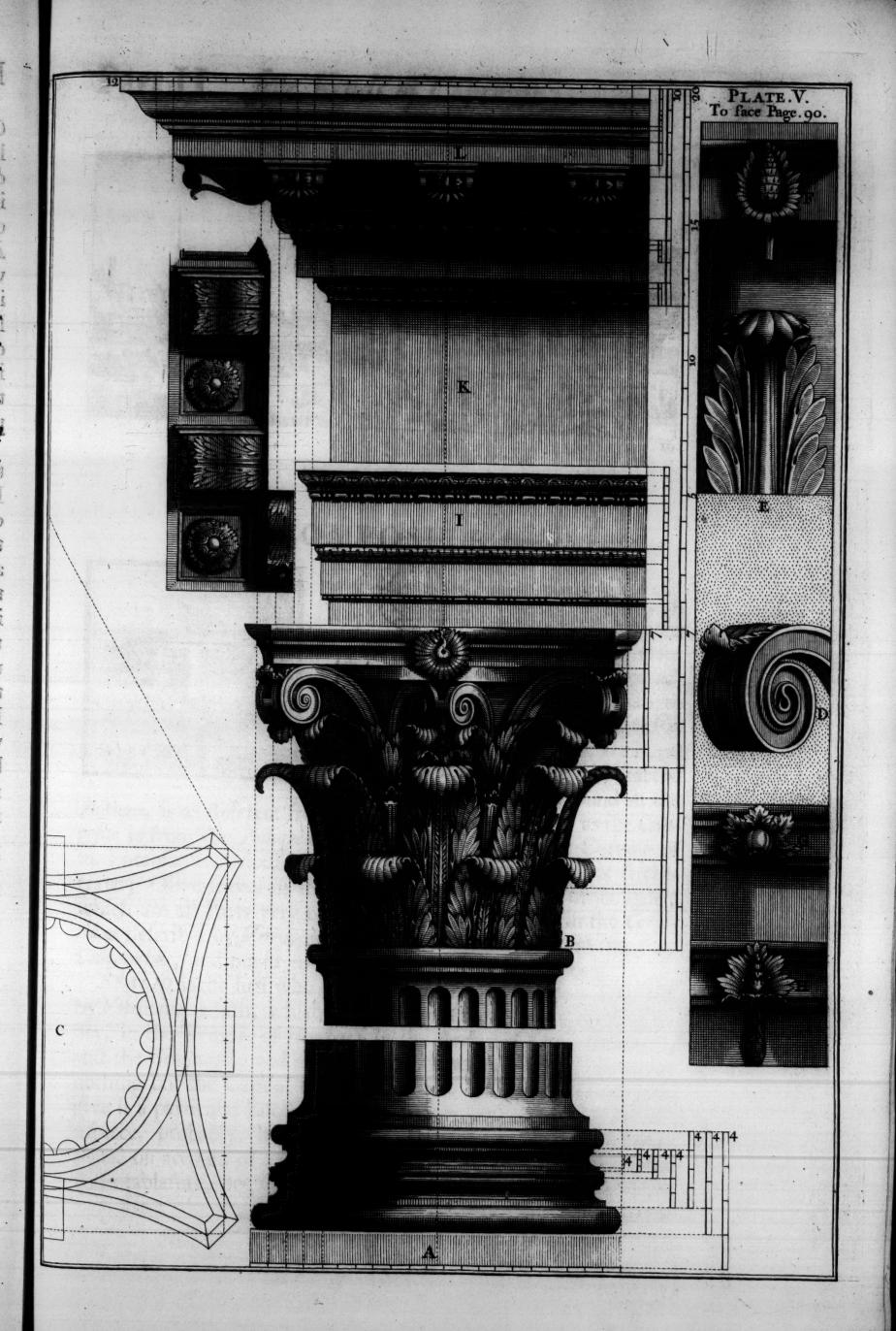
F The Flower of the Abacus of the Capital, in the same Temple of Vesta.

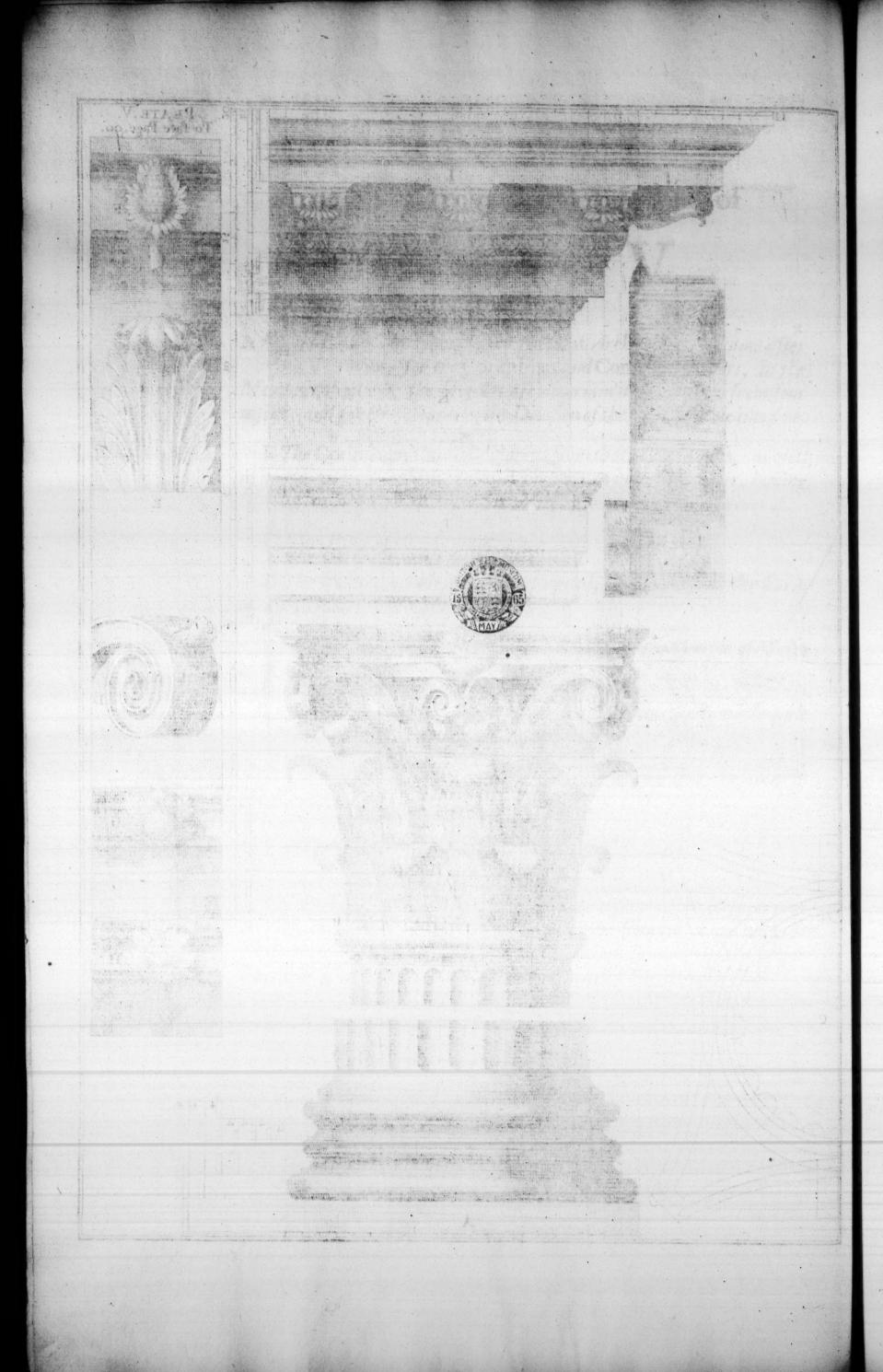
G The Rose of the Abacus of the Capital, on the three Columns in the Campo Vaccino.

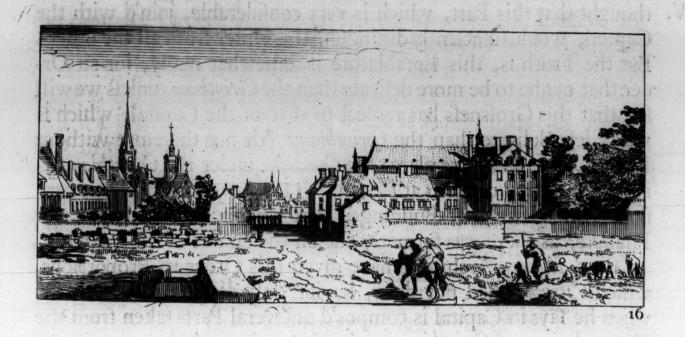
H The Flower of the Abacus of the Capital in Basilic of Anto-

when Columns are coupled in Cortico

IK L. The Entablature; where may be observed, the Respect that Modillions, which are over the Upright of the Column, have with the Projectures of the Base, and with the Naked, as well of the upper Part, as of the lower Part of the Column.







CHAP. V. It to To

Of the COMPOSITE Order.



donly

HE Order vulgarly call'd Composite, is, by some, nam'd the Italic, because the Romans were the Inventers of it, and for that, the Name of Composite, or Compounded, denotes nothing that is peculiar to it; the Corintbian itself, according to Vitruvius, being compos'd of the Doric and Ionic: And it may even be said that the Corintbian Order, as it is found in the

Antique, is as different from the Corinthian of Vitruvius, as the Composite is from the Antique Corinthian, which has, in the Cornice of its Entablature, Modillions, and Ovolo; Astragals in its Architrave; Olive-leaves in its Capital, and two Tores in its Base; which are all Parts very considerable, and not found in the Corinthian describ'd by Vitruvius, which is what was first invented by Callimachus, and ought to be esteem'd the true Corinthian.

SERLIO is the first who has added to the sour Orders described by Vitruvius, a fifth, which he forms from the Remains of this Order, in the Temple of Bacchus; in the Arches of Titus, Septimius, and the Goldsmiths, and in the Baths of Diocletian, but he has taken nothing but the Capital from the Antique: Palladio, and Scamozzi, give it a particular Entablature, which they copy from Nero's Frontispiece, probably, because this Structure, which passes for Corintipian, on account of its Capital, having a particular Character in its Entablature, not found in other Corinthian Works, these Authors thought

CH. V. thought that this Part, which is very considerable, join'd with the Capital, would sufficiently diffinguish this Order from all the others. But the Truth is, this Entablature is somewhat massy, for an Order that ought to be more delicate than the Corintbian, unless we will say that this Grossness has respect to that of the Capital, which is really less delicate than the Corintbian: 'tis not therefore without Reason, that Scamozzi places the Composite under the Corintbian, as it is in the Arch of Lions at Verona. This Composite Cornice is very sit for Entablatures of Buildings, that have neither Columns nor Pilasters, as there was formerly one on the outside of the Lowere.

THE Modern Architects have given this Order its Proportions, which Vitruvius had not done, having only defign'd its Character, when he says its Capital is compos'd of several Parts taken from the Doric, Ionic, and Corinthian: and as he makes no Alteration in the Proportions, either of the Capital, or of the rest of the Column, he does not allow that this Composition makes an Order different from the others. But Serlio, and most of the Moderns, give another Proportion to the Composite Column, and make it higher than the

Corintbian.

It has been faid, that according to the Augmentation of Heights given to the Orders, in proportion as they become more delicate, the whole Composite Order has forty-six little Modules, of which, the Pedestal has ten; the Column, with its Base and Capital thir-

ty, and the Enbtalature fix.

BASE THE Base of the Pedestal, with its Plinth or Zocolo, has, as in all of the the other Orders, the fourth Part of the entire Pedestal, and with-Pedestal. out the Zocolo, the third of the whole Base. This Base confists of fix Members besides the Plinth, as the Corithian does of five: these are a Torus, a small Astragal, an inverted Cyma with its Fillet, a large Astragal and a Fillet, making a Sweep to the Naked of the Die. For the Heights of these Members, divide this Part of the Base, without the Zocolo, into ten Parts, giving three to the Torus, one to the small Astragal, half a Part to the Fillet of the Cyma, three and a half to the Cyma, one and a half to the large Aftragal, and half a Part to the Fillet, whence springs the Sweep. The Projectures being taken, as formerly, by the fifth Part of the little Module, one is for the large Aftragal, two and two Thirds for the Fillet of the Cyma, the Projectures of the Torus being equal to that of the whole Base, which is the same as its Height.

THE Proportions and the Character of this Bale are different in the Antique, as well as in Modern Authors. In the Arch of Titus, it is compos'd of ten Members, among which there is a Scotia; in that of Septimius it has but four Members, and in the Goldsmiths Arch, it has five. Scamozzi gives his Corinthian Order the Bale

which

which is in the Composite of the Arch of Titus: that which I give the Composite Order, and which has six Members, is a Mean between that of the Arch of Titus, and that of the Arch of Septimius; of which, the one is clutter'd with too much Ornament, and the other is too plain for an Order compos'd of all the others.

The Cornice of the Pedestal, which is as the others, one eighth Cornice Part of the whole Pedestal, is compos'd of seven Members, which of the are, a Fillet with a Sweep over the Die, a large Astragal, a Cyma Pedestal. with its Fillet, a Corona or Drip, and an Ogee with its Square or Fillet. The whole Height of this Cornice, being divided into twelve Parts, the Fillet has half a Part, the Astragalone and a half, the Cyma three and a half, its Fillet half a Part, the Corona three Parts, the Ogee two, and its Fillet one. The lower Fillet, with the Astragal above it, have, in Projecture, one Fifth of the little Module, the Cyma, with its Fillet, has three Fifths, the Corona has three and a Third, and the Ogee, with its Square, has four and a half.



Manner, the Leaves are cut effer the Manner of the Acertinue, or

is broaden by half one of these right was it is high. The Pione of the Court of the Medale, as in the Court of the Order, and the Plan of the Court of the right.

thacus, over the Ovolo, tries to the upp

What was said of the Character, and Proportion of the Parts of the Base, may also be said of those of this Cornice, the number of those Members which compose it, being excessive, in the Arch

of Titus, and too few in that of Septimius.

THE Base of the Column is like that of the Countbian Order; of the thus it is in the Arch of Titus: Sometimes, the Attic Base is made Column ute of, as in the Temple of Bacchus, in the Arch of Septimus, in that of Verona, and in the Baths of Diocletian. Vignola makes a Base particular to his Composite, taking it from a Base which formerly belong'd to a Corintbian Order of Diocletian's Baths, and which differs nothing from the Corintbian Base, but in that it has only one Astragal between the two Scotias, and that the other Astragal, which this Place is depriv'd of, is put between the great Torus and the first Scotia. But besides that this Base is not in use, the Astragal, which is the only Member it has, between two Fillets, being but weak, and ill fustain'd by the Scotias, renders this Part of the Base too thin and sharp. It seems as if the Character of this Base was taken from the Bases of the Temple of Concord, which, instead of the two Astragals, and the two Fillets, that are between the Scotias, have only one Fillet, which is still less tolerable than the fingle Astragal of Vignola's Base, which, at least, is accompanied, and fustain'd by two Fillets.

THE Shaft of the Column, differs in nothing from the Corintbian,

Column. but that its Height is increas'd by two little Modules.

The Capital.

Shaft of the

THE Capital makes the principal Character of this Order, the Base being often the same as the Corintbian, as has been said, and the Entablature fometimes also alike in these two Orders, as may be feen in the Arch of Titus, where the Entablature is perfectly Corinthian. The Height of the whole Capital, as in the Corinthian Order, is taken from the Diameter of the lower Part of the Column, to which is added one fixth Part more. Four fixths of the Diameter are given to the Leaves, and this being divided into fix Parts, one of them is for the bending of the Head of the Leaves. The three other fixths that remain above the Leaves, which are for the Volutes, Ovolo, Astragal and Abacus, is parted into eight; fix and a half of these are given to the Volute which rests upon the Head of the fecond Range of Leaves, two to the Abacus, one to the Space between the Abacus and Ovolo, two to the Ovolo, and one to the Astragal with its Fillet. The Flower, which is in the middle of the Abacus, over the Ovolo, rises to the upper Part of the Abacus: it is broader by half one of these Eights than it is high. The Proje-Etures are determin'd by Fifths of the little Module, as in the Corinthian Order, and the Plan of the Capital is also made in the same Manner, the Leaves are cut after the Manner of the Acanthus, or Brank-

Part II. five Kinds of Columns.

Brank-Ursin. The Flower in the Middle of the Abacus, is compos'd of several Leaves; of which, some join in the Middle, and others turn off sideways. Under the Horns of the Abacus, there are Leaves which return upwards, as in the Corintbian Capital; and others, also, that lie upon the Side of each Volute. Instead of the Stalks, which are in the Corintbian Capital, here are small Flowers, lying close to the Vase or Bell, twisting round towards the Middle

of the Face of the Capital, and terminating in a Rose.

In the Works of the Antique, and of the Moderns, we find a Diversity as to the Proportions of the Members of this Capital; and likewise as to its whole Height, which, in some Buildings, has more than the seventy Minutes I give it; as in the Arch of Titus, where it has seventy-four and a quarter, and in the Temple of Bacchus, where it has seventy-fix: in some others it has less, as in the Arch of Septimius, where it has but sixty-eight and a half, in the Gold-smiths Arch, sixty-eight and three quarters, and in Serlio but sixty. The Abacus, which I give seven Minutes and a half, has eight and two Thirds in the Goldsmiths Arch; nine in the Arch of Septimius, and in the Baths of Diocletian; ten in the Arch of Titus, and thirteen in the Temple of Bacchus. The Volute, which I make twenty-five Minutes, as it is in the Temple of Bacchus, has twenty-eight in the Arch of Titus, and but twenty-two in the Baths of Diocletian.

THE Differences of the Character lie in this, that the Volutes, which ordinarily descend and touch the Leaves, are, sometimes, separated from them, as in the Baths of Diocletian, and in the Arch of Septimius; that the Leaves, which, in the Works of the Antique and Moderns, are unequal in Height, the lower Rank being tallest, are yet equal in some of the Moderns; that the Volutes of the Moderns, most commonly spring from the Vase, as they do in the Arch of Titus; and sometimes they possess the Length of the Abacus, over the Ovolo, without striking into the Vase, as in the Arches of the Goldsmiths, and of Septimius, in the Temple of Bacchus, and in the Baths of Diocletian. That the Volutes, whose Thickness is contracted in the Middle, and enlarg'd above and below, in the Temple of Bacchus, in the Arches of Titus and Septimius, and in the Baths of Diocletian, have their Sides parallel in Palladio, Vignola, and Scamozzi; and that the same Volutes, as well in the Antique, as in those Modern Authors that have written, are made as solid; whereas, at present, they are made, by our Carvers, after a more airy and free Manner; so that the Folds of the twisted Bark, which compose them, do not touch, but stand hollow from each other; which, in my Opinion, is done with a great deal of Judgment: for, without it, this Volute has something in it too massive, and CH. V. which suits not well with an Order, that, in general, is the lightest and most delicate of all.

THE Entablature, as in all the other Orders except the Doric, is divided into twenty Parts, of which, fix are given to the Architrave, as many to the Freeze, and eight to the Cornice. These Proportions are different in Authors: for the Freeze is less than the Architrave in the Temple of Bacchus, in the Arch of Septimius, and that of the Goldsmiths, in Palladio, Scamozzi, Serlio, and Viola: but these two Parts are equal in the Arch of Titus, and in Vignola.

The Composite Architrave is more different from the Corintbian, than the Corintbian is from the Ionic, having but two Faces, between which there is a small Ogee, and instead of the great Cyma above with its Astragal, there is a Quarter-round between an Astragal and a Hollow. To find the Heights of these Members, the whole Architrave is divided into eighteen Parts, as in the Corintbian Order, of which, five are given to the first Face, one to the little Ogee above it, seven to the second Face, half a Part to the small Astragal next upon it, one Part and a half to the Quarter-round, and three to the Hollow, of which, the Fillet has one and a quarter. The Projecture is of two Fifths of the little Module, as in the Corintbian Architrave.

THE Proportions and Character of this Architrave, have much Conformity with what we find in the Architrave of the Frontispiece of Nero, and of the Basilic of Antoninus, from whence, Palladio and Vignola have modell'd the Architrave of their Composite Order, tho's in both these Structures, the Capitalis Corintbian. But the Truth is, that in all the Antique Remains of the Composite Order, the Architrave is very different from this: for in the Temple of Bacchus, the three Faces are quite plain, without any Separation by Astragals; in the Arch of Septimius, there are indeed but two Faces, but the Cyma above, is an Ogee with an Astragal, as in the Corintbian Order, and in the Arch of Titus, it is all perfectly Corintbian.

The Freeze has nothing particular, except that in the Temple of Bacchus it is round, which Palladio has imitated; and that in the Arch of Septimius, it is join'd to the Architrave with a large Sweep. The Freeze of the Frontispiece of Nero, which I have follow'd, has also a Sweep, but it is above; the Sweep I give it is much less, being only made to join the Naked of the Freeze to the first Member of the Cornice, which, being a Fillet, usually requires a Sweep, for the better Conjunction of it to the Mouldings, or Members, upon which it is plac'd; and 'tis probable the Sweep of the Frontispiece of Nero was made so large as it is, because this Freeze is enrich'd with Sculpture of a considerable Thickness, and the Sweep prevents that ill Effect which the Carving produces in those

those Freezes that have no Sweep, where it equals the Projecture of the first Members of the Cornice; although, in truth, there are more carv'd Freezes without a Sweep, as those of the Temple of Faustina, and of Jupiter Fulminans, of the Market of Nerva, of the Arch of Titus, and that of the Goldsmiths; than there are that have Sweeps, as that of the Temple of Manly Fortune, of the Sibyl at Ti-

voli, and the Frontispiece of Nero.

THE Cornice is divided, as in the Corinthian, into ten Parts, and has likewise thirteen Members; but it seems more heavy, by rea- Cornice fon the Corona is much more masfy, and so are the Modillions, which are not cut with a Scroul, nor cover'd with Leaves, but are Entablafquare: The first Member of this Cornice, which is a Fillet, has a quarter of one of these ten Parts; the second, which is an Astragal, has as much; the third is an Ogee, and has one Part; the fourth, which is the first Face of the Modillion, has one Part; the fifth, which is a small Ogee, has half a Part; the fixth, which is the fecond Face of the Modillion, has one Part and a quarter; the feventh, which is a Fillet, has one quarter of a Part; the eighth, which is a Quarter-round, has half a Part; the ninth, which is the Corona, has two Parts; it has a Throat underneath, one Third of a Part deep; the tenth, which is an Ogee, has two Thirds of a Part; the eleventh, which is a Square or Fillet, has one Third of a Part; the twelfth, which is a large Cymaife, has one Part and a half, and the thirteenth, which is a Fillet, has half a Part.

THE Projectures are regulated as usually by Fifths of the little Module: giving one Third of these Parts to the first Member, which is a Fillet, and another Third to the little Astragal over it, one Part and a Third is given to the large Ogee, which is the next Member; four Parts and two Thirds to the first Face of the Modillion, five Parts to the second, five Parts and two Thirds to the Quarter-round above the Modillion, eight Parts and a half to the Corona, nine Parts and a Third to the Ogee of the Corona, and

twelve to the great Cymaife.

ALTHOUGH the Character of this Cornice, as well as the Proportions of its Mouldings, are from the same Entablature of the Frontispiece of Nero, from whence the Architrave has been already taken, I have follow'd very near what Palladio and Scamozzi have copied, so that always following the Medium, I at first propos'd to my felf, I keep between the two Excesses: for Example, the Corona, which is extraordinary large, in the Frontispiece of Nero, being a Fourth of the whole Cornice, and which, in Palladio, has but a fixth Part, and no more than a feventh in Scamozzi, has here the fifth Part; the Modillion, which, in the Frontispiece of Nero, and in Scamozzi, is but the fourth Part of the whole Cornice, has a Bb

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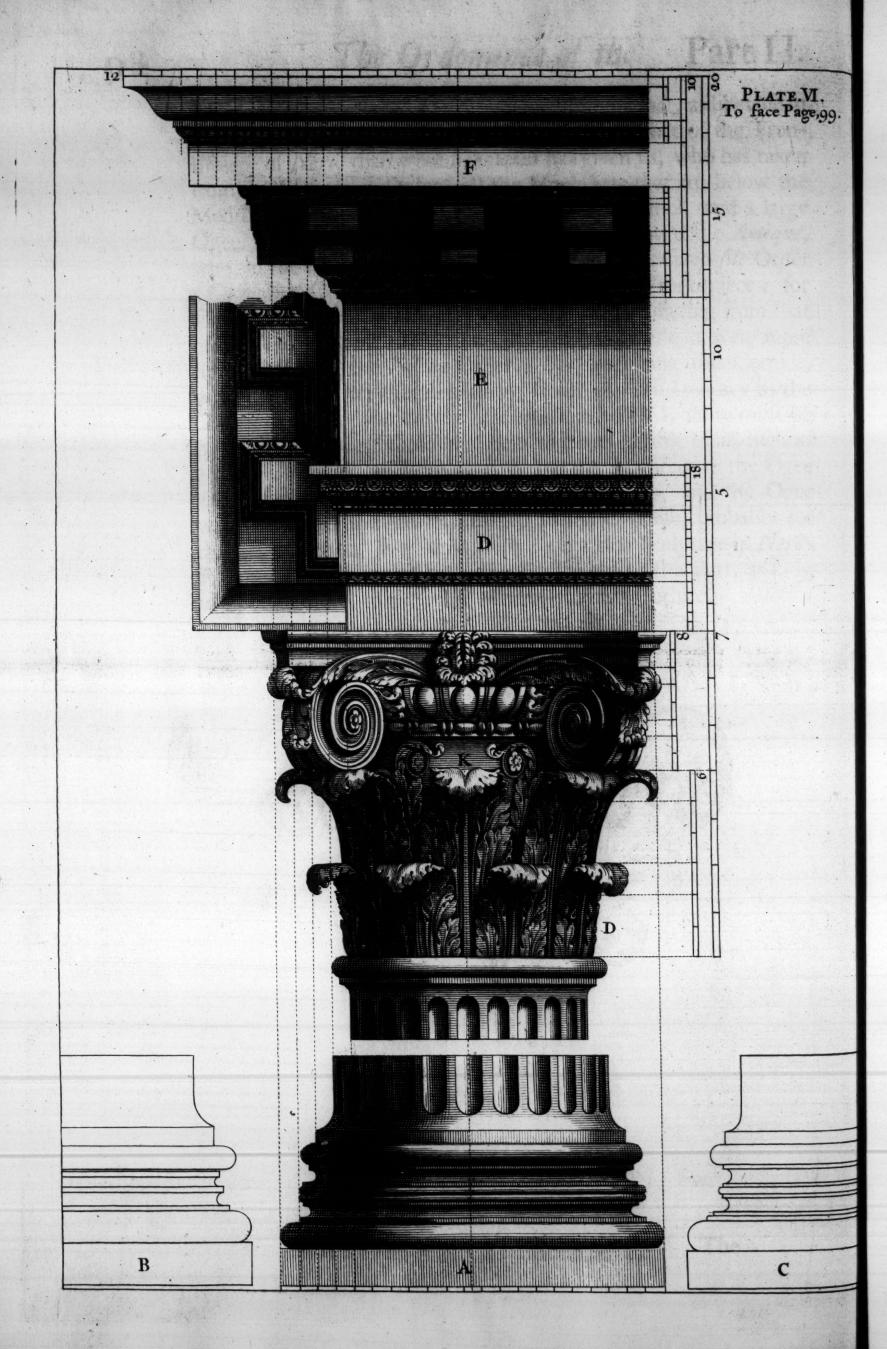
Third of it in Palladio; I have followed him in that, as likewife in almost all the rest, which is more conformable to that of the Frontispiece of Nero, than what Scamozzi has given us, who has taken from the Corimbian Order, all the Mouldings that are below the Modillions: namely, an Echinus or Ovolo, a Dentel, and a large Ogee. The rest of the Moderns have neither follow'd the Antique, who, in the Arches of Titus and Septimius, give the Composite Order a Corinthian Cornice, nor the Pattern of Nero's Frontispiece: for Vignola gives it a Cornice very plain, not much differing from that of the Ionic Order. Serlio and Bullant have made it even more homely than in the Tuscan Order. For enriching this Cornice, which is not fo very fuitable to an Order of fuch Delicacy as the Composite, where the Capital is so much imbelish'd, there must be no want of carving those Members that are capable of it, such as are the Aftragal, and the Ogee below the Modillions, the Ogee and Quarter-round of the Modillions themselves, and the Ogee which is under the great Cymaife, which Cymaife, probably for this very Reason, is adorn'd with a very rich Sculpture in Nero's Frontispiece, although Carving is not effential to this Part, as it is, in some measure, to the other Members of this Cornice.



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The EXPLANATION of

PLATE VI.

A THE Base of the Composite Order of the Arch of Titus, which is the same that the Ancients gave to the Corinthian Order.

B The Base of the Temple of Concord, in Imitation of which, Vignola made his Base of the Composite Order.

C The Base which was formerly in the Baths of Diocletian, copied from that of the Temple of Concord, and given by Vignola to the Composite Order.

D The Architrave taken from Nero's Frontispiece, and the Basilic of Antoninus.

E The Freeze, having a Sweep at the upper Part, as it is in Nero's Frontispiece, where the Sweep is much greater, probably on account of the Ornaments carved in the Freeze

F The Cornice, taken also from the Frontispiece of Nero.

K The Capital, according to the Proportions and Character which our Carvers, of late, have given it; where the most remarkable Things are, the Equality of Height in the Leaves of Acanthus, the Tenderness of the Volutes, which are opened very gracefully, the Circumvolution of the Bark which compose them, being parted one from the other, and the Volute not being massive and solid, as it i in all the Works of the Ancients and Moderns.

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OF

PILASTERS.



on Chap. VI.

Of PILASTERS.



FTER having spoken of Columns, it remains that we discourse of what relates to Pilasters, which are square Columns. These square Columns are of several Kinds, their Difference arising from the Manner in which they are applied to Walls: which makes also the Difference between other Columns: for as there are some insulate or naked,

standing quite detach'd from the Wall, others that are conjoin'd to it at the Corner, having two Faces free, and others, which being half sunk in the Wall, or only a third Part, have none, but the Face in front, entirely free; so there are, also, some Pilasters wholly detach'd or insulate; there are others that have three Faces clear of the Wall, others that have only two, and others that have but one entirely free and disengag'd.

SQUARE or Insulate Pilasters, are rarely found in the Antique, though there is one Instance of them in the Temple of Trevi, describ'd by Palladio. They are plac'd at the Extremities of Porches, to give the greater Strength to the Corners. Those that have three Faces out of the Wall, and those that have but two, were call'd Antæ by the Ancients. Vitruvius calls those that have but two Faces out of the Wall, Angular Antæ, or Antæ of the Walls that enclose the Temple; to distinguish them from others that have three Fa-

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CH. VI. ces disengag'd, and which are plac'd at the End of the Walls of the Porch. Pilasters that have but one Face out of the Wall, are also of two forts; for there are some that stand half out of the Wall, and others but a fixth or seventh Part: these latter, which were seldom made use of by the Ancients, are now most common in our Architecture.

> THERE are four principal Things to be regulated in Pilasters, namely, their Projecture out of the Wall, their Diminution, the Manner of placing the Entablature upon them, when it lies upon a Column at the same time, and their Flutings and Capitals.

> THE Projecture of Pilasters which have only one Face out of the Wall, ought to be half their Breadth, or elfe, at most but a fixth Part, as it is in the Frontispiece of Nero, unless you are oblig'd, by fomething, to give them a greater Projecture. In the Porch of the Pantheon, the Pilasters, that are on the out-side, advance but a tenth Part, and fometimes they have but a fourteenth Part, as in the Market of Nerva. But when Pilasters are to receive Imposts, whose Profiles come against their Side, their Projecture ought to be a Quarter of their Diameter; and this Proportion has this further Conveniency, that it does not oblige us to cut our Corinthian and Composite Capitals irregularly: for it falls out that the lower Leaf is cut exactly in the Middle, and in the Corintbian Order, the Stalk also is cut in like manner. On this very account of the Symmetry of the Capitals, when half Pilasters meet at the inward Angles, they should have more than half their Diameter, as shall be shewn in the following Chapter.

> PILASTERS are not usually diminish'd, when they have but one Face out of the Wall; those on the out-fide the Porch of the Pantheon are also without Diminution: but when Pilasters stand upon the same Line with the Columns, and the Entablature is to be continued over both, without making a Break, as it is upon the Side, without the Porch of the Pantheon, the Pilaster, then, ought to have the same Diminution as the Column; that is, on the Face which respects the Column, leaving the Sides, without any Diminution, as we see it practis'd in the Temple of Antoninus and Faustina. But when the Pilaster has two Faces clear of the Wall, standing at a Corner, and one of the Faces answering a Column: that Face is diminish'd as the Column; as it is in the Porch of Septimius, where the Face that does not answer the Column is not diminish'd: but however, there are Examples in the Antique, where the Pilasters have no Diminution, as within the Pantheon;

or where they have but very little, and not so much as the Column, as in the Temple of Mars ultor, and the Arch of Constantine. In this Case, the Practice of the Ancients is sometimes to lay the Architrave just over the Naked of the Column, which makes it recede somewhat within the Naked of the Pilaster, as is done in the Temple of Mars ultor, within the Pantheon, and in the Porch of Septimius; sometimes they part the Difference in two, giving the Architrave a Projecture of half the Odds, beyond the Naked of the Column, and making it recede the other half within the Naked of the Pilaster, as it is in the Market of Nerva.

As to their Flutings, there are sometimes Pilasters that have them, though the Columns they accompany, have none, as in the Porch of the Pantheon; but in this Building, the Columns not being of white Marble, are without Flutings, because Marbles of divers Colours are very feldom fluted. There are also Columns fluted, sometimes accompanied with Pilasters not fluted, as in the Temple of Mars Ultor, and in the Porch of Septimius. no Flutings made on the Returns of Pilasters, when they have less Projecture than half their Diameter. The number of Flutings is different in the Antique: there are but seven in the Porch of the Pantheon, in the Arch of Septimius, and that of Constantine; there are nine within the Pantheon, though the Columns have no more than the usual number of twenty-four. The Flutings of Pilasters are always odd in their Number, unless in half Pilasters, that meet at inward Angles, for there, four Flutings are made instead of three and an half, and five instead of four and an half, when the whole Pilasters have seven or nine. This is to be understood, that the Pilasters, thus meeting in an inward Angle, should have so much more Breadth than half their Diameter, as may receive the even number of Flutings before-mention'd: which is done to avoid the ill Effect of the Capital, that, being folded as it were in the Angle, would be too much narrow'd in the upper Members; and in those Capitals that have Leaves, this Narrowing would produce a Confusion not to be prevented but by such Enlargement.

The Proportions of these Capitals are the same with those of Columns, as to their Heights; but their Breadths are different, the Leaves being much wider, because Pilasters, being of more extent than Columns, have yet but the same number of Leaves, which is eight for their whole girt, though there are Instances of Pilasters that have twelve Leaves, as in the Frontispiece of Nero, and in the Baths of Diocletian. The usual Disposition of the Leaves of Pilasters is such, that, in the lower Row, where the lesser Leaves

CH. IV. are, there are two on each Face, and, in the upper Row, one in the middle, and two Half-leaves on the Sides, which are half the great Leaves folded back upon the Angle. What is farther remarkable is, that commonly the Rim of the Vale, or Tambour, is not strait, as the lower part is, but a little circular and prominent in the middle: that of the Bafilic of Antoninus advances the eighth Part of the Diameter of the Column below, but in the Port of Septimius it is but a tenth, and no more than a twelfth in the Portico of the Pantheon.

THERE are also many other Things, relating to Pilasters, discours'd of in the two following Chapters.



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Of the Abuse of the Change of Proportions.



HERE are some Things so rivetted in the general Opinion of the World, that a Man would be thought ridiculous, should he attempt to scan them, though they seem not of so undoubted Authority, when more nearly look'd into. The Change of Proportions, in Architecture, and Sculpture, which, they say, ought to be made according to the dif-

ferent Aspects, may justly be reckon'd among this Number. Architects speak of this as a Point that gains them the greatest Reputation, and pretend that 'tis in the Practice of the Rules, they have for this Purpose, that the Excellency of their Art consists. However, there are some of Opinion, that this Change is no such stupendous Matter, that these Rules have not been put in Execution, that even the contrary has been practis'd in the most approv'd Works, and that the Reasons, upon which they are grounded, are receiv'd by common Consent, as they have been a long time, only because they have pass'd without Examination.

may conclude this Treatise with one Paradox, as I began it with another, which also relates to the Change of Proportions. For in the Presace I have endeavour'd to shew that the greatest part of the Proportions of Architecture being arbitrary, and not of the number of those things that have a positive and natural Beauty,

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Сн. VII. there is nothing ought to hinder us from making some Change in the establish'd Proportions, and finding out others that would appear as beautiful. And I affert here, that these Proportions, once regulated, ought not to be alter'd, and made different, in different Buildings, for any Reasons of the Optics, or Difference of Aspects, they may have. But I foresee much more Contradiction in this fecond Paradox, than I found in the first, where I was only to encounter the Opinion of Architects, who being govern'd by the Idea they have of what is beautiful, do not confider this Idea as a thing that they themselves have form'd, by Study, and by observing approv'd Buildings; but take it for a natural Principle. For the rest of the World, who are free from the Prepoffession of Rules and Custom, and on that account, do not perceive whether an Astragal, or a Torus, have too much, or too little Height, or Projecture, will eafily conclude, with me, that had the Proportions of Architecture, Beauties that are natural, we should naturally know them, without any need of Instruction, by Use and Study. But, as to the fecond Paradox, I am affur'd there is no one but thinks the Change of Proportions a thing very just and reasonable, and who is not confirm'd therein by that famous Story of the two Statues of Minerva, made to be let on a very high place, of which, they pretend, one succeeded ill, because the Sculptor had not chang'd the Proportions: and I doubt not but those who shall hear the Arguments on that Subject, may yeild to them as being specious, and be very loth to quit an Opinion, which, they think, is founded upon Reasons so good as those drawn from the Optics, and the deceitfulness of our Senses, which they think it very reasonable that Art should remedy.

> FOR upon account, that the Images of things painted, in the Eye, are smaller, and less distant, when the Objects are more remote, than when they are near, and that a foreright View makes the Objects appear otherwise than an oblique one, they imagine we ought to supply that Defect, and remedy it by Art: therefore they fay, that Columns, which are usually really lessen'd towards the top, should have a less Diminution, when they are very great, than when they are very small; because their Length makes them appear to be leffen'd upwards, as a Gallery feems narrower at the further End. They would likewise have the Entablatures upon great Columns, larger than the regular Proportion, because their Height makes them appear small; and the Faces of the Members, which are generally plum in moderate Situations, they would have lean forward, when plac'd very high, left they should appear too narrow; and laftly, they require that the Soffites, or under Parts of the Members, which are commonly level, should rife up before,

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when they are plac'd low, and but little above the Eye, left they live should feem to have too little Projecture. In the same manner, in Sculpture, they would have those Figures which are to be set at a Distance, made larger, bolder, and more rude, that they might not appear too mean and obscure; and that such Statues as are placed in very high Niches, bend forward, that they may not feem chur, which are the finallest Orders, and the Ensbrawasd neal of

I begin the Examinations of these Reasons by matter of Fact, and do affirm, that there are no Instances of the Practice of this Rule of the Change of Proportions, and that if fome may possibly be met with, we are not to think this Change was made for any Reasons from the Optics, but only by chance, fince these Changes

have not been practised in the most approved Buildings. To signal

To begin with the Diminution of Columns, we find that the largest, and least, have the same Diminution in the Antique, and that there are small ones, which have even less than the largest. The great Columns of the Temple of Peace, of the Portico of the Pantheon, those of Campo Vaccino, and of the Bafilic of Antonine, the very Shafts of which, are between forty and fifty Foot high, have the fame Diminution as those of the Temple of Bacchus, where the Shaft is scarce ten Foot high. But those of the Temple of Faultina, of the Porch of Septimius, of the Baths of Diocletian, and of the Temple of Concord, whose Shafts have from thirty to forty Foot in Height, have even more Diminution than those of the Arches of Titus, of Septimius, and of Constantine, whose Shafts have no more than from fifteen to twenty Foot Tis plain, then, that the diff ferent Diminution of these Columns was not determined by any Rules of the Optics, fince the tallest having a great Diminution, and the shortest a small one, would, according to those Rules, produce an Effect quite contrary to the Intention of the Architects!

Asyto raising the Soffites, or Planchers, on the forepart, 'tis pretended to be done, that the Projectures of the Members may the better appear, and they hold this to be principally necessary in three Cafes; namely, when they are to be view d'ar a grear Distance, when the Parts are not fituated very high, and when there is not Liberty to give them their proper Projectures. Nevertheless, we find that, in these very Cases, the contrary has been practis'd in the Antique. For, in regard of the Aspect, in the Porch of the Pantheony where the View may be very distant; and where, on that account the Projectures would feem finall, the Soffites, nevertheless, are not rais'd before; and yet, within the Temple, they are rais'd, where, the View being necessarily near, there was no need of it. As to parts fituated low, we find the contrary of this Rule, in most approv'd Buildings, where the Soffites are often rais'd in those parts open't to have. CH. VII. that are plac'd highest, which have no need of it, and yet are not rais'd in those that are plac'd lowests. Thus it is in the Theatre of Marcellus, where the Sossies, as well of the Architraves as the Imposts, are rais'd in the second Order, and are not in the first, and in the Collifeum, where they are equally rais'd in all the sour Orders, and again, in the Temple of Vesta at Tivoli, and in the Temple of Bacchus, which are the smallest Orders, and the Entablatures situated the lowest of any, where the Sossies are not rais'd at all. Lassly, as to the small Projectures we are sometimes oblig'd to give, this too does not appear to have occasion'd the raising of the Sossies, since there are Buildings of good Esteem, where the Projectures are very large, and yet the Sossies are rais'd mas in the Architrave of the Temple of Manly Forume, where the Sossies of the Faces are rais'd, though the Largeness of their Projectures is extraordinary.

As to the Inclining of the Faces, which some think should be made to lean forward, to hinder the oblique Aspect from making them look narrow, they ought to be made id according to their Rule, when too near a view confines one to led them obliquely, or when 'tis necessary that a Face should appear large, when we are oblig'd for some Reason to make it little; but we do not find it thus in the Antique. For in the Portico, and within the Pambeon, where the Aspects are different, all the Faces lean backwards; and so they do in the Temple of Backlus, and in the Baths of Diocletian, where the View being negroof Notessity, they lought, according to the Rule, to have lean'd forwards Again we almost constantly find? that though the Faces have no more than their due Proportion, wet notwithstanding they are made deaning backwards, and we find some that are so, though they are even less than they ought to be. This is observable in the Temple of Vesta, at Twell, where the upper Face of the Architrage, which is much too small, leans backwards. In fine, we generally find that the Paces lean backwards. whether they are in those Parts that are situate yeary high, or low; nor can any one given Reason why they incline forwards in the Temple of Mars Ulter, and in the Market of Nerva, which are almost the only Antique Buildings where they do so For the Read fon that obliges one fometimes to make them lean backwards is the Need there is of giving a convenient Breadth to the Soffites of the Members, of which an Impost, a Cornice, or an Architade, is compos'd, when we are not willing to give that Projecture to the whole, which it would have did not the Faces lean backwards. But 'tis evident the Aucieus did not make them dean beek for this Reason, since they did it without any such Necessity, as appears by the Architrave of the Temple of Manly Fortune, where the Faces lean backward, though the Soffites have double the Projecture they ought to have. NOR

Non do we find that the Ancients made their Sculpture more imbols'd, rude and coarse, nor that their Figures were larger in Works fituated very high, than those that were plac'd near the Sight. In the Trajan Column, the Figures of the Bas-relief are neither larger nor more imboss'd above than below. The Statue of Trajan, which stood at top of it, had not the fixth Part of the Column; and 'tis certain, it was less by half, in proportion to the Column, than the Figures, which Palladio fets upon Columns, lefs by half than the Trajan Column: and this Architect, who talks like all the reft, of the Change of Proportions, and who practices it no more than the others, makes his Figures, that are plac'd on high, and those that are set below, of the same bigness, and very often bigger below than above, in the Antique Temples he has defign'd. Pliny remarks, than on the Top of the Pantheon, there were formerly Statues, which were not reckon'd into the Number of excellent Works, though they were exquifitely fine, because, says he, they were plac'd too high, that is, the Distance hindred the seeing them distinctly. Nevertheless, the famous Athenian, Diogenes, who made them, as he did, also, all the other Figures of that Temple, set them in that Place; and there is no ground to think but this famous Artist knew the Story of the two Minervas, and might value himself, as others do, upon the Change of Proportions, but he made the same use of it as the rest, who never practis'd it.

'Tis true, however, that there are Instances, both in the Antique and in the Moderns, that make it evident, they have fometimes had Intentions of changing the Proportions, on account of the View: but befides that these Sorts of Changes are rare, 'tis certain they produce an ill Effect. We have Examples of this in the Court of the Louvre, where the Figures in the Bas-relief of the Attic, are made much larger than those that are below, which displeases every one. The same has also the like Effect, at the Portal of Saint Gervais, where, by reason of the great Height, the Statues are made of an excessive Bigness. But the most remarkable Instance of the Change of Proportions, made on account of the Optics, is in the Pantheon: it confifts in that the Squares, or Pannels, of the Comparitment of the Vault, being funk, as it were by Steps, in manner of hollow Piramids, the Axis of these Piramids, instead of tending to the Center of the Cupola, tends downwards to a Point in the middle of the Temple, five Foot high above the Pavement, fo that this Axis is not perpendicular to the Base of the Piramid, as it ought, in refpect of Symmetry, to have been: for this Change makes these hollow Piramids appear from below, in the middle of the Temple, just as they would, were one rais'd to the Center of the Vault, and that they were all directed thither. But as foon as one goes from CH. VII. the middle, this Effect ceases, and we perceive the Obliquity of the Axis, and the Defect of Symmetry in the Piramids; which is a thing much more disagreeable to the Eye, than if the Sinkings had been made with a true and proper Direction, in respect to the Center of the Cupola: for the only Inconvenience of this direct, and as I may call it, natural Tendency, is, that one part of the Tread, as it were, of these Steps of the lower Side of each Piramid, would have been hid by the Height or Rife of the Steps, when one stands near the Wall, and that we should have seen a greater Part of these Treads, the further we went from the middle: which is no more an Inconvenience than it is, that, in a Face viewed fideways, the Nose hides some part of one of the Cheeks. For the Architect of the Pantheon, has done just as if a Painter, being to draw a side-Face, should make a Nose to be view'd fore-right, least, if it were as it ought to be, it should hide part of one of the Cheeks. Labaco, who like other Architects, commends the Change of Proportions, without practifing it, has made his Advantage of the ill Success this Alteration had in the Pantheon, and in a Defign which he has printed, for the Cupola of Saint Peters, he has made the hollow Piramid of the Compartiments of his Vault, tend to the Center of the Arch, as they ought to do, being of Opinion, that the Change of this Center could not have a good Effect, though the great Height of the Church of Saint Peter, above that of the Pantheon, adds mightily to the Inconvenience caus'd by the Thickness of the Steps, hiding the Tread of those within them. But 'tis likely, he had no regard to this Inconvenience, as being what the Sight is never offended at, there being nothing more common, than to see some Parts hide others, and nothing to which the Eye is more accustom'd than to supply the Proportions of entire Objects, by the Judgment it makes of the Bigness of that whole, of which it sees only a part.

AND this Reason, of the Judgment of the Sight, is, in general, the Cause why we ought not to change the Proportions, since this Judgment is never wanting to inform us right, and hinder our being deceiv'd by those Alterations and disadvantageous Effects, which are thought to be produc'd by Distance and different Situations. And this is what remains to be explain'd, that there is no Reason to change the Proportions; as there is no Example, among the Ancients, that they have been chang'd, which has been already shewn.

THE Judgment, wherewith all the Senses are furnish'd, is a thing we posses without knowing it, and without perceiving that we use it, by reason of Custom, which being as a second Nature, makes us less dispos'd to perceive that we exercise this Action, so that it becomes, as it were, of different Kind from the rest of the Actions of the Judgment, which not being so often reiterated, cannot be

exercis'd without our making Reflexion, and taking particular Cognilance of them. On this account it is, that, among the Senses, those which are most commonly us'd, as the Sight and Hearing, have a Judgment much more exact than the others, and are less deceiv'd, in discerning the Circumstances that may cause a Mistake. For this is the Reason, that we judge so certainly by the Eye, and the Ear, of the Distance, Bigness and Force of Objects, and that the other Senses cannot so easily discern these Circumstances; as for Example, that the Feeling does not eafily discern the Difference of the Heat of a great Fire, at a Distance, from that of a little one, near at hand; that the Taste does not often distinguish the Weaknels of a small Wine, from that which a stronger has, when mix'd with Water; and that the Smell mistakes a Scent that is weak in its own Nature, for that which is only fo, on account of the Smallness of its Quantity; whereas the almost continual Exercise of the Sight, and Hearing, has, by a long Custom, gain'd them a Facility and Readiness, which the other Senses have not for want of Use. For if, when we feel the End of a Stick, with the Extremities of two Fingers a-cross one another, we presently think we feel two Sticks, 'tis because we are not us'd to feel after this manner, fince if we continue to touch it so for a pretty while, we are no longer deceiv'd, and we perceive that we feel but one Stick. Just as when the Eyes are any ways displac'd, and out of their ordinary Situation, we see Things double; and yet, those that squint, whose Eyes are naturally thus displac'd, do not so, because they are accustom'd to correct, by their Judgment, the Error, which the unnatural Situation of their Eyes leads them into.

IT is very probable, that Animals, at their Birth, fee very erroneously, and that they judge distant Objects to be as small, as the Draught, made in their Eye, represents them, and that Experience having shewn them they were deceiv'd, corrects the Error of this first Judgment; and so in time, the Judgment becomes accustom'd to make use of all Means to defend it self from being impos'd on, 'till at last, it comes to the same Perfection we find, when we begin to fee well; and this Perfection is fuch, that there is no one who thinks a Tower at a distance, which is hid by putting the Finger near the Eye, is really less than the Finger, nor that a Round, viewed obliquely, is an Oval, nor an Oval a Round; although the Appearances of these Things in the Eye, are really fuch. And 'tis of great use to reflect upon the Exactness and Nicety of this Judgment, which is fuch as would be incredible, did not Experience confirm it, and did we not fee, every Day, that a Coachman, fifty Paces off, will tell us his Coach cannot pass between two others, though there wants not above two Inches of Room

Ch. VII. Room enough to do it; that a Sportsman judges of the Bigness of a Bird upon the Wing, that a Gardener knows the Size of the Fruit on the Top of a Tree, that a Carpenter knows that of the Timbers on the Roof of a House, and that an Engineer measures exactly, by his Eye, the Thickness and Height of a Water-spout.

Nor is it by Experience only, that we are convinc'd the Eye does not deceive us so much as some alledge, but Reason also shews it, by teaching us what Methods the Judgment takes to hinder our being deceiv'd, and what it founds it felf upon, to acquire fo difficult a Knowledge with so much Certainty. To know what this Foundation, and what these Means are, we must consider what Painters do when they would deceive the Sight, by making Things appear near or far off. For what they do for this purpose, is what the Judgment of the Sight observes and examines with the greatest Exactness, which consists principally in two Things, which are the Modification of the Size and Figure, and that of the Colours. The modifying the Size and Figure, serves to shew the Distance, when Things are lessen'd and dispos'd as they ought to be, by making, for Instance, a Floor, or Pavement, to rife, a Cieling to defcend, and the further Extremities of the two Sides, to come nearer together; the Regulation of the Colours serves to produce the same Appearance of Distance, when their Force is diminish'd, by taking away the too ftrong Lights from the enlightned Parts, and the two great Obscurity from those that are shadow'd; and this in fuch Manner, that these two Kinds of Modification always go to-For we must suppose, that the Judgment of the Sight examining all these Things, concludes, that an Object, whose Appearance is small in the Eye, is really small and near, if its Parts are enlightned by a very strong Light, and the Shadows are very dark, and that a Pavement, which is describ'd rifing to the Eye, is not so in Effect, but that it is very long, when the Parts that compose it are so colour'd, that, as it rises, the Lights and Shadows grow weaker and weaker.

Besides these two Modifications, which the Judgment of the Sight examines with great Exactness, it also takes notice of other Circumstances, and makes use of other Means to know the Magnitude and Distance of Objects far off. These Means consist in the Comparison it makes of Things known, with those unknown, so that the Knowledge of the Distance informs it what is the Magnitude, and the Magnitude which it knows, tells it the Distance: for we judge that those Objects whose Size is known, as a Man, a Sheep or a Horse, are at a good Distance, when they appear small to the Eye; and for the same Reason, when a Tower, which we know to be a great distance off, seems large to the Eye, we judge

that

that the Tower is actually large, and 'tis to be understood, that this is done by supposing that these last Means of judging, taken from the Comparison of Things known, with those unknown, ought to be join'd with the former, taken from the Modification of Size and Figure, and that of Colours: for the modifying of the Colours, enabling us to judge of the Distance, and the Distance, making us judge of the Size, and the Modification of the Size, making us also judge of the Distance, 'tis certain that the Mind, which has been a long time habituated, by almost infinite Experiments, to examine, unite, and compare, all these things together, acquires, at length, such a readyness of discerning the Size, Distance, Figure, Colour, and all the other Truths of distant Objects, as is next to infallible.

But that which proves the Exactness and Infallibility of the Judgement of the Sight, and demonstrates certainly, that this Sense is not subject to be surprized and cheated as some aftert, is the difficulty of effecting it, though endeavour'd at by the most perfect and ingenious Art: for excepting some few Birds that fly at Random, we rarely see an Animal deceiv'd by a piece of Perspective. The Painter may do his utmost in diminishing his Figures, in giving a due Obliquity to his fide-lines, and weakening the Lights and Shadows to the same Degree that Nature throws them in their several Distances: but as it is impossible to describe them so precisely as Nature does, the Eye, which is more just and exact than the Painter's Hand, eafily perceives what is wanting of this ultimate Perfection. And there can no other Reason be given why we are not deceiv'd by painting; but the certainty of the Sight, which, befides the Imperfection that is always in a Picture, by the Fault of the Workman, discovers, still, other Defects, which necessarily arise from the Thing it self; it being impossible but that, notwithstanding all the Faintness that can be express'd in the colouring, to make, for Instance, a Mountain appear very far distant, the Eye will perceive the Lights and Shadows with the Strength that Bodies have which are nearer: because the Inequalities of the Cloth or Wall, which are really near us, have some of these Lights and Shadows so strong as is not seen in things at a distance. And 'tis on the same account, that the Voice of those who speak, as we say, from the Belly, which refembles a Voice at a great Distance, does not deceive us, when we mind it with Attention; because the Ear discovers, in this faint Voice, some small Sounds intermix'd, that have all the Strength of a nearer Sound. For, though a Picture far off, does not shew, very distinctly, the Inequalities of its Surface, yet it is true, that the Fidelity and Exactness of the Sight, is such, that the imperfect, and confus'd Perception we have of it, is sufficient to prevent our being deceiv'd. THIS Ff

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This Exactness of the Judgement of the Sight, and the Certainty CH. VII. of the Knowledge it gives us, being then so precise as they are, 'tis not very difficult to conceive that the Distance of Objects, not being capable to deceive and surprise us, these Proportions cannot be chang'd without our perceiving it, and for this very Reason, such Change is not only useless, but ought to be accounted vicious: because the Eye of one, for Example, who knows what ought to be the Proportion of an Entablature, can't fail of perceiving that which is made larger upon a great Column, in proportion, than on a little one, notwithstanding the Height it is rais'd to; just as every one can judge whether a Man that stands at a high Window, has a Head bigger than Ordinary; so that if the usual Proportion of an Entablature be any ways reasonable, on account of that relation which the Mass, to be sustain'd, has to the Strength of that which bears it; this Entablature, which is really greater than it should be, in proportion to the Column that supports it, will necessarily displease the Eye: and the same thing would happen, if, to prevent a Statue in a Nich, or a Bust upon a Console, from appearing to lean backward, we should set it leaning forward: for if they do lean

forward, they would infallibly appear so to do.

For the same Reason, if, in Sculpture, to prevent the great Distance from making the Parts of Works plac'd very high, appear too confus'd and indiffinct, we make them rude and gross, the Eye will discover them to be so; because comparing the Distance which it knows, with the Confusion it naturally expects, in things at such a Distance, it will be offended to find that Distinction which it judges should not be there; as we should not like a Picture, where things, at a distance, were made as strong, and as distinct, as those that are near: for if it is true, that none but the ignorant, love to fee the Hairs of the Eye-brows, and the Red of the Lips, distinctly express'd, in Figures that are very remote in a Picture; so there are none to be found, that can bear, in Statues plac'd ever so high, that the Eyes should be hollow'd, the Holes in the Hair-curles made, and the Muscles shewn stronger than they are, unless among such as know not wherein the Beauty of Sculpture confifts: for those who have an Idea of the Perfection of Workmanship, will always perceive that the Proportions are chang'd and spoil'd, at least by comparing one Part with another; it being impossible to make every Part equally hard and expressive, as for Example, to make the Shadow of the Head upon the Neck, as dark and distinct as that which is about the Eyes, that are hollow'd and funk deeper, on purpose to give them the Strength that is affected in Sculpture, fituated in Aspects at a great Distance.

For supposing that the Eye were not capable, by its Judgement, to inform us, very exactly of the Bigness of things at a distance, and that a Coachman is not so well assur'd of the Room he thinks his Coach cannot pass in, as if he measur'd it, it must also be confider'd that it is not this Exactness alone that is requir'd to make the Eye capable of not being deceiv'd by the Distance, when the Business lies in the Knowledge of Proportions: nor is it necessary, in this Case, to know absolutely the bigness of a Thing; but to know how to compare it, with those that are adjoining to it. For as a Coachman judges the Space through which he would pass, to be little, chiefly, because he compares it with the Size of the two Coaches between which he must pass: so the Eye judges of the Bigness of an Entablature, and knows very well when it is too large, though it cannot precifely tell of what Dimension it is; it being sufficient that it compares the Bigness of it with that of the other Parts of the Building. Now Distance does not hinder the making this Comparison; because, though it does lessen the Appearance of the Bigness of this Entablature, it does the same, also, by the other Parts of the Building that are near, and accompany it, and can, by no Means, prevent the Eye from discerning the Addition, which the Architect, or Sculptor, has given to the Bigness of any Part.

But although it were not certain, that the Judgement of the Sight is capable of hindering the Distance of Objects, and their Situation, from deceiving us, yet 'tis certainly true, that the Change of Proportions is no good Remedy for this suppos'd Defect; because it cannot have a good Effect, but from one certain stated Distance, and only supposing the Eye not to change its Place: and that as in those optical Figures, whose Proportions are so adjusted, that being view'd at one certain Point, they produce a good Effect, and are utterly deform'd when the Eye is moved to another Place; so those Proportions that are chang'd in a Building, to produce a good Effect to the Eye, viewing them from one certain Place, would also appear very deform'd and disagreeable, when we change our Situation: because the Aspect, which is oblique, when we are near, ceases to be so in proportion to the Distance we remove: And thus the Face of a Corona, or Drip, which is made larger, or leaning forwards, that the Obliquity of the Aspect might not make it appear too small, would certainly seem too big, when, by changing

the Aspect, this Obliquity ceases.

In fine, to conclude in one Word, I believe that upon due Confideration, we shall find no Reason at all to alter and spoil the Proportions, and make a Thing defective, out of defign to mend it; all those Appearances that Distance, and the Situation produce, which are taken for ill Effects and Defaults, being the true Condi-

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CH. VII. tion, and natural Shape of things, which cannot be chang'd without rendering them visibly deform'd. For all that has been, or can be said, on this Subject, is, that it is not so sure, that Distance makes Proportions appear otherwise than they are, as it is certain that the Change of Proportion is, in Effect, the Corruption of it; and that there is much greater Danger, that a Proportion should appear corrupt and vicious, when chang'd, than when it is not so.

In the mean time, what will become of the unanimous Opinion of all Architects, founded upon the Authority of Vitruvius, who teaches this Change of Proportion, and prescribes it Rules? Is it credible, that for near two thouland Years, that this Maxim has been establish'd, no one has given himself the Leisure to examine it, and that so many great Persons, who have probably made Reflexion on so important a Question, have not been able to discover the Truth? There must certainly be something in this: and my Opinion is, that as one may have all the Genius necessary for an Architect, without amufing ones felf with things, which, we believe, have nothing in them, but a vain and fruitless Subtlety; those that have been capable of resolving the most subtle Questions, may have neglected this, whose Discussion was thought useless, because of the Authority of Vitruvius, who seems to have decided it; and also, because there are some Cases, where the Change of Proportion, may, in some measure, be admitted. But, as on these Occasions, the Change is not made on account of the Optics, as will go near to be prov'd; the Truth of the Proposition remains still unshaken, namely, that the Proportions of Architecture are not to be chang'd, according to the different Aspects.

The Ambition that every one has to magnifie the Art he professes, has inclin'd Architects to turn all those things into Mysteries, which they could not give a Reason of: for making use of that great Conceit, we generally have of things of former times, as there are scarce any more ancient than those we see in the Remains of the Buildings of the Greeks and Romans, they would fain establish it as an unmoveable Foundation, that there is nothing in those admirable Remains, that was not done with the greatest Reason; and when the Diversity of Proportions, in Buildings equally approved of, is objected to them, they attribute it to the Diversity of Aspects, which they suppose was the Cause of this Change of Proportions, which ought to have had different Rules, by reason of the Diffe-

rence of Situation.

THE Examples mention'd in the beginning of this Chapter, taken from the most approv'd Buildings of Antiquity, have plainly shewn that this could not be, because, in the same Aspects, the Proportions Proportions are very often different, and, on the contrary, they are alike in different Aspects: It remains to shew, that in those Cases, where a Change of Proportions is allowable, it is not founded on the Optics, nor upon any Essect that the Distance, or the Situation

of the Members of Architecture, can produce.

THE first Case, in which, I think, the Proportions may be chang'd, is when we would not give much Projecture to a Cornice, an Architrave, or a Pedestal: for then, the Faces may be made leaning back, to regain, by fo doing, what we give to the Projectures: and 'tis certain, that here, Optics have nothing to do; because the Projectures have really their due Magnitude; and that there is no Intention of making them appear otherwise than they truly are. What is to be observed in the Practice of this, is, that it ought not to be put in execution, but in Places that are concave, as on the Infide of Domes or Lanterns, in the Bands, or Architraves of Arches, Door-cases, Window, and Pannel Mouldings; and, generally, in those Dispositions, where, no Angle, made at the Return, may shew the Profile of the Moulding; in which, these Inclinations of the Faces, have a very ill Effect. There are Examples of these Faces leaning backwards, made with good Success within the Pantheon, in the Architrave of the Arches that are over the Entrance, and over the middle Chappel: but this is not practis'd in the Architrave of the Attic, where the Faces are distinguish'd only by Marbles of different Colours, without making any Projecture one beyond the other: which may, probably, be one of the Reasons there are, to think, this Attic was not made by the same Architect as built the rest of the Temple.

ANOTHER Case is when one would set a Coloss of a Figure in a very high Place; for then, we may make it much larger than the other Figures that are below it: but 'tis evident, this is not done for any Reason of the Optics, because the Intention is, that the Figure should appear a Colossus. And 'tis to be observ'd in fuch Case, that this Statue be set upon something that bears a Proportion to its Bigness, it not being proper to put it, for Example, upon a fecond and third Order, which being necessarily less than the first, ought not to bear Statues disproportionate to it, but such as are less than those of the first Order. So that it must be contriv'd in fuch manner, that there may appear to be a Recess of the Work, comprehending feveral Orders, or, at least, bearing Proportion to the Colossal Statue. This is observed in the Triumphal Arch of the Fauxbourgh of S. Anthony, where the Colossal Statue, of the King, is fet above, upon the Massive of the Building; against which, there is an Order, quite round about, that rifes not above half the Height of this massive Part; for the massive serves for a Pedestal to the

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CH. VII. great Statue, which is very much larger than those that are upon the Columns of the Order, to which, they are proportion'd, as the great Statue is to the Mallive.

> NEITHER ought we to make Statues plac'd above, bigger than those set below, when they are of the same Kind, that is, when both stand each in their own Stery and Order: But, on the contrary, they ought always to be diminish'd, as the Orders are,

which are necessarily less above than below.

THE third Case is, when two half Pilasters make an inward Angle: for then they must be allow'd a little more than their Semidiameter, to prevent the ill Effect, the Capital and the Flutings would necessarily produce, were not the half Pilasters inlarg'd in this manner, as I noted in the precedent Chapter. manifest, this Change is not made for any Reason of the Optics, but to give some of the Parts a little more Breadth than they should have, that we be not oblig'd to straiten and narrow others more than they ought to be: for this is done in the Corinthian Capital, in giving the two half Leaves, of the second Range, more than the half, in the inward Angle; because, had they no more than precifely the half, the bending of the Leaf would be render'd too sharp and pointed; and the middle Volutes too close together,

were they not thus enlarg'd.

THE fourth Case is, if we would, according to the Opinion of Scamozzi, place the Composite Order between the Ionic and Corinthian, which I very much approve of, the Composite Capital having much Affinity with the Ionic, and the Grossness of its Entablature, making it, also, bear more Proportion to the massive Orders, than the Corinthian does: for in this Case, it would be neceffary to change the Proportions, which might be done, by fetting the Composite Column, with its Entablature, upon the Corinthian Pedestal, shortning the Shaft of the Column by two little Modules, and in like manner, placing the Corinthian Column, with its Entablature, upon the Composite Pedestal, and adding two little Modules to the Length of its Shaft. There may be, also, other Cases, where it may be permitted to change the Proportions: but I believe there are none where it ought to be done, for any Reasons of the Optics: for a Sculptor may be allow'd to choose fuch Postures as will best suit the Disposition of his Figures, and avoid all fuch as would produce an ill Effect; as Monf. Girardon has done, very judiciously, at Seaux, where he has made a very large Statue of Minerva, fitting at the Top of the Building, on the highest Acroterion of the Pediment, and dispos'd it so, that, being feated fomething high, the Knees hide no Part of the Body, as they would have done, had they been rais'd higher: but the Truth Truth is, that in this Change, he had no Defign to make the

thing appear otherwise than it is.

To conclude this Chapter, I cannot but fay, 'tis strange, that, in Cases, where Proportions should have been chang'd, there some have affected to make them alike. For Example, the three most celebrated Authors that have written of Architecture, Vignola, Palladio, and Scamozzi, in the Ionic, Corinthian, and Composite Orders, make the Height, of all the Entablatures, of the same Proportion to the Length of the Column; Vignola giving, all his Entablatures, very near a Fourth of the Column, and Palladio, and Scamozzi, giving them all, indifferently, about a Fifth Part. For in my Opinion, it had been more rational to fet the more massive Entablature, as is that of the Fourth of the Length of the Column, upon that which is short and well-set, as the *lonic* may be said to be, in Comparison of the Composite, and to place the lighter, as is that of the fifth Part of the Length of the Column, upon that which is tall and slender, as the Composite may be said to be, with respect to the lonic, than to have done the contrary. For this Reason, I cann't but think, that the Variation, and Change of Proportions, which I have us'd in my Entablatures, according to the Difference of the Orders, is somewhat better founded, than the Change which is made on account of different Situations and Aspects.

I did forget to note, wherein this Diversity of Proportions, which I give my Entablatures, consists, in the Place where 'tis expressly spoken of in this Treatise, which is in the fourth Chapter of the first Part, where 'tis said, that the Entablatures have one and the same Height, in all the Orders; and 'tis from this Equality of Height of the Entablatures, that the Difference of their Proportions, with respect to the Columns, arises: For the Length of the Columns, going always increasing, while the Height of the Entablatures remains the same, it follows, that the shortest Columns have Entablatures larger, in Proportion, than the longest. Thus the Length of the Tuscan Column is of three Entablatures and two Thirds; the Corinthian of sour and two Thirds, and the Composite of sive: The Proportion of the Entablature going always diminishing, equally by one Third of the Height of the whole Entablature, in each Order, as the Order it self becomes more slender and

delicate.

Modellions being proper on the

ient the Bids of the Crofs-Rotters or Purli



CHAP VIII.

Of some other Abuses introduc'd into the Modern Architecture.



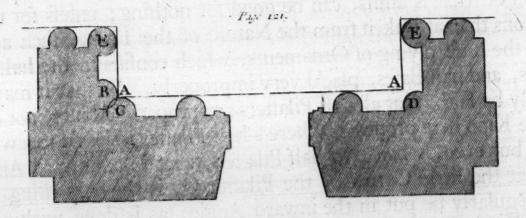
S, in Languages, there are several Ways of Speaking, contrary to the Rules of Grammar, which long Custom have so authoriz'd, that there is now no correcting them; and others that are not yet so generally receiv'd, but their Establishment might be prevented, were they rejected by such as have the Reputation of Speaking well: So in Architecture,

also, we may observe Abuses of both these Kinds. There are some that Custom has not only render'd tolerable, but even so necessary, that, though contrary to Reason and Ancient Rules, they are, themselves, become Rules of Architecture. These Abuses are such as are mention'd in the Presace, as the Swelling of Columns, the Modillions of Pediments perpendicular to the Horizon, and not to the slope Line of the Pediment; to which may also be added, the receiv'd Custom of putting Modillions on the four Sides of a Fabrick, and in the Cornice, that runs a-cross under the Pediment, placing them in the first Order, instead of reserving them for the last above; Modillions being proper on those Sides only, where the Rasters are set, whose Ends they represent, and not in the Cornice that runs under the Pediment, but only in the Pediment it self, where they represent the Ends of the Cross-Rasters or Purlins; there being nothing more contrary to what Modillions are intended to represent, than

to put them in those Places where there can be neither Rafters nor Purlins. The Custom of making Triglyphs in any other Part than over the Column, which is the only Place where there are Beams, whose Ends the Triglyphs represent, may also be put in the number of those licentious Practices which Custom has authoris'd.

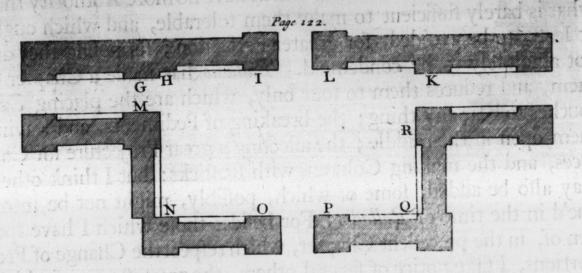
But there are other Abuses which have no more Authority than what is barely sufficient to make them tolerable, and which ought at least, to be avoided, for greater Perfection; supposing they are not absolutely to be condemn'd. Palladio has made a Chapter of them, and reduces them to four only, which are the placing Cartouches to bear any thing; the breaking of Pediments, and leaving them open in the middle; the affecting a great Projecture for Cornices, and the making Columns with Rusticks: but I think others may also be added, some of which, possibly, might not be introduc'd in the time of Palladio: For besides those which I have spoken of, in the precedent Chapter, which respect the Change of Proportions, I take notice of several others, the greatest part of which, indeed, are not so bad, as those mention'd by Palladio.

The first is the making Columns, and Pilasters, interfere, and penetrate each other. This Penetration, in Columns, is more rare than in Pilasters. There is an Instance in the Court of the Louvre, where, in the inward Angles, as A, there are plac'd two Columns, BC, instead of being content with the Column D, which is capable of doing as much as the two Columns B and C, and much more naturally, if I may so say, supposing, that as the Column E sustains two Architraves which make the prominent Angle, the Column D bears also those which make the inward Angle; there being no Reason why one Column should not be sufficient to bear the inward Angle, since it is so, for bearing the outward ones.



Palladio, in a Palace which he built at Vicenza, for the Count Valerio Chiericato, has also made Columns which penetrate each other, which he calls double Columns.

Ch. VIII. The like Abuse is more common in Pilasters, it being the Practice of the Moderns, when, for Example, the Pilaster G makes an Advance, and causes the like in the Entablature and Pedestal, to join to it an half Pilaster H, which both penetrates it, and is penetrated by it; this half Pilaster being to support the Entablature that runs, continued, over the Pilaster I, the Abuse consists in this,



that besides the Parts penetrating each other, the half Pilaster H, is also out of its place, and wholly useless, the Pilasters K and L, being sufficient, The Reason of this is, that those Works, where Pilasters, and half Pilasters are, as GHI, which have no more Projecture than the fifth or fixth part of the Diameter of the Pilaster, and that make an Advance but of this Thickness, ought to be consider'd as Bas-reliefs, which represent the whole Relievo MNO, and that those, which, as LK, have no half Pilasters, represent the entire Relievo PQR. Now it is certain, that the Manner MNO, has no Reason in it, and that the Disposition of the Pilaster Q, in the whole Relief, is much better than that of the Pilaster N, which, not being directly opposite to the Pilaster M, but on the Side of it, is quite out of its place. And 'tis also certain, that the Representation of what is amis, can be good for nothing; unless for other Reasons than are taken from the Nature of the Thing, such as are here the multiplying of Ornaments, which confifts in the half Capitals, and half Bases, plac'd very improperly. So that it may generally be faid, that all half Pilatters are properly Abuses, not only in the Kind here propos'd, where a half Pilaster is join'd to a whole one, but even, when two half Pilasters meet in an inward Angle. So that the little Corner of the Pilaster Q, is the only thing that can regularly be put in the inward Angle; as is done within the great Portico's that are in the Front of the Louvre. For though we find half Pilasters in inward Angles, in the most approv'd Works of the Antique, such as the Pantheon; yet as they always suppose a mutual Penetration of two Columns, we may truly fay, they are contrary to exact Regularity, with which, however, we may sometimes

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times be permitted to dispence, when there is manifest Reason so to do.

THE second Abuse is the Swelling of Columns, of which, I have spoken, in the eighth Chapter of the first Part, where I have shewn that this Custom is without Reason, and that we do not find that

it has been practis'd in the Antique.

THE third Abuse is the Coupling of Columns, which some cannot approve of, because there are scarce any Examples of it in the Antique. But the Truth is, if we may be admitted to make any Addition to the Inventions of the Ancients, this Contrivance deferves to be received in Architecture, as having a confiderable Beauty and Convenience. As to its Beauty, it is perfectly according to the Tast of the Ancients, who affected those Buildings where the Columns flood close together, beyond all others, and had nothing to object, but the Inconvenience this Closeness caus'd, in the Manner they perform'd it: for this Streight oblig'd them to enlarge the middle Intercolumnations, and was also the the Occasion that Hermogenes invented the Pseudodiptere, to enlarge the Isles, or Walks, of the Porches of the Temples, call'd Dipteres, because, there, the Isles were double, having two Rows of Columns, with which, the Wall of the Temple made two Galleries on the out-fide. Now, this knowing Architect, who was one of the first Inventors of the Ancient Architecture, though fit to take away the Row of Columns in the middle, and of two narrow Galleries, to make one that would have the Breadth of both, and of a Column befides. From the Example of Hermogenes, the Moderns have introduc'd this new Manner of placing Columns, and, by coupling them, have found a Way to make the Portico's more free, and the Orders more graceful: For placing the Columns two and two, the Intercolumnations may be kept fo large, as that the Doors and Windows, which are in the Portico's, be not darken'd, as they were among the Ancients, where these Openings were wider than the Space between the Columns; for in their most ordinary Methods of placing of Columns, it was necessary, in an Intercolumnation of eight Feet, that the Columns should be of four or five Feet Diameter; whereas, when the Columns are coupled, 'tis sufficient if they have two, or two Feet and a half Diameter: and by this Means, the large Intercolumnations have not the ill Appearance they would have; did the Columns stand singly, one by one; which, in that condition, would feem too weak and incapable to support the Length of the Entablature, between Column and Column.

THIS Manner of placing Columns may be confider'd as a fixth, added to the five Ways that were in use among the Ancients, the first of which was call'd Pyncnostyle, because the Columns were plac'd

CH. VIII. very close, the Intercolumnations being no more than a Diameter, and a half of the Column; the second was call'd Systyle, where the Columns were not quite so close, the Intercolumnations being two Diameters; the third was call'd Euftyle, where they were moderately close, the Intercolumnation being two Diameters and a Quarter; the fourth was call'd Diastyle, where they were a little wider, and the Intercolumnation of three Diameters; and the fifth was call'd Aræostyle, where the Columns were far distant, the Intercolumnation being four Diameters. Now this additional Sixth, may be faid to partake of the two extreme Kinds, before mention'd, namely, of the Pycnostle, where the Columns are very close, and of the Arxostyle, where they are very wide; and that this Disposition of Columns, which can only be reputed abusive, because the Ancients, did not use it, may be plac'd in the number of several other things of the like Nature, which Custom has authoris'd, and of which, Mention was made at the Beginning

of this Chapter.

THE fourth Abuse is the enlarging of the Metopes, in the Doric Order; to give the Intercolumnations those Breadths we may have need of. For if, for Instance, we would couple two Columns, we must necessary set the Triglyphs further asunder, and enlarge the Metopes; the Space between the Middle of one Triglyph, and the Middle of the other, being much less than that between the Middle of one Column, and the Middle of the other, how near foever they are plac'd. Now the Ancients were very scrupulous of making this Enlargement. Vitruvius says that Pytheus and Tarchesus, two famous Architects of Antiquity, on this very Account, thought this Order might not be made use of in Temples. Hermogenes, who, on other Occasions, dispens'd with the Ancient Rules, could never resolve with himself to take any Liberty in the Doric Order, for, having got together a great Quantity of Marble, for building a Temple to Bacchus, he quitted the Defign he had to make it of the Doric Order, and made it of the Ionic. The Moderns have been more bold; Palladio, in the Palace of Count Valerio, which was mention'd before, has inlarg'd the Metopes, in the middle Intercolumnation of the Portico, to make it somewhat larger than the other Intercolumnations, which have two Triglyphs; and this he has done without any other Reason, or Necessity, than because he would not inlarge his middle Intercolumnation, so much as he must have done to receive three Triglyphs; which, however, ought to have been done, according to the Rules Vitruvius gives for Porticos of the Doric Order, where he puts three Triglyphs in the middle Intercolumnation, though the other Intercolumnations have but one. The skilful Architect of the Portail of S. Gervais, which is one of the

the finest Structures that have been built these hundred Years, has also made no Difficulty, that he might couple his Columns to inlarge the Metopes in the first Order, which is Doric. At the Portail of the Minimes in the Palace Royal, there are also other Liberties taken in the Doric Order, as the putting half Triglyphs in the inward Angles, after the Example of Palladio, who has done it in the same Palace of Count Valerio.

THE fifth Abuse is the taking away, in the Modern Ionic Capital, the lower part of the Abacus, which some call the Bark or Rind, being that which makes the Volute, in the Ancient Ionic Capital, and that makes the lower part of the Abacus in the Composite Capital, and which, also, as I think, ought to do so in the Modern Ionic; for this Part being suppress'd, there remains only the upper Part, which is an Ogee: so that the Abacus is left thin as a Tile; and as it rests only upon the convex parts of the four Volutes, which it touches but in four Points, this produces a very ill Effect; because it seems to have a Weakness that offends the Eye. In the Capitals of the Temple of Concord, and those of Fortuna Virilis, which are the Models from whence the Modern Ionic Capital is copied, there is, indeed, an Abacus, that confifts likewife of a fingle Ogee: but this Ogee, though thin, has not that Appearance of Weaknels, because it bears not upon the Convexity of the Volutes, these Volutes not issuing out of the Vase, but running quite strait over it, as in the Antique Ionic: So that this Abacus, as thin as it is, has nothing in it offensive, being every where equally supported; which is not fo in the Capital we speak of, where there is a large void Space between the Abacus and the Vafe. The best Manner, in my Opinion, would be to leave the Abacus quite whole, as it is in the Composite Capitals of the Antique, where the Volutes spring from the Vase, and penetrate the lower part of the Abacus. And this is what Palladio has done in the Capital he has defign'd, and which he gives for that of the Temple of Concord, in which, because the Volutes penetrate the Vafe, he has made the Abacus entire, and like that of the Composite Capital of the Arch of Titus, where the Volutes enter into the Vase. For there is no Reason not to imitate this Particular of the Abacus of the Antique Composite Capitals, fince 'tis from their Model, that all the rest of the Modern Ionic Capital is And 'tis in the Want of this Imitation, that the Abuse contaken. fifts.

THE fixth Abuse is to make one great Order, comprehending several Stories, instead of giving an Order to each Story, as the Ancients did: and 'tis probable, this Liberty takes it Rise from the Imitation of those Courts the Ancients call'd Cava Ædium, or inward Quadrangles, and chiefly of those stil'd Corinthian, where the EntaCH. VIII. blature of the Buildings, which environ'd them, were fuffain'd by Columns that went from bottom to top, and contain'd leveral Stories; the Difference between these Corinthian Courts, and our Buildings of one great Order, being only that the Columns, in the Corinthian Courts, were at some small Distance from the Wall, to bear the Projecture of the Entablature, which ferv'd as a Pent-house, and that our Columns are half funk in the Wall, and that most commonly, also, instead of Columns, we make use of Pilasters only. Now the Abuse lies in the Affectation of a great Order, which is not proper to all forts of Buildings; for as a great Order is the Majesty of Temples, Theatres, Portico's, Galleries, Salons, Vestibles, Chapels, and other Buildings, which permit, or even require, a great Height; so it may be said that this Manner of including several Stories in one great Order, has, on the quite contrary, something very mean and poor, as representing a great Palace half ruin'd and abandon'd, in which, private Persons, being willing to dwell, and finding that great and lofty Apartments were not convenient for them, or being willing to husband Room, had made

Entrefoles, or half Stories in it.

THIS does not hinder, but that, sometimes, in great Palaces, the Architect may find a good Pretence for one great Order, when, 'tis evident, he is oblig'd, by the Symmetry, to continue a great Order in the rest of the Building, which is necessary for some confiderable part of it. This has been done very judiciously in several Buildings, but particularly in the Palace of the Louvre, which being built on the Side of a great River, which gives a vast and spacious Distance for the View of it, had need have a great Order, that it might not appear mean and little. This Order, which comprehends two Stories, and is plac'd upon the lower Story, which ferves it as a Pedestal, and which is properly the Rampart of the Castle, is rais'd in this manner, by reason of two great and magnificent Portico's, which take up the Front of the Entry of the Palace, and which being to serve as a Vestibule, to all the Apartments of the first Story, requir'd this great and extraordinary Height, which is given to its Order, should needs be pursu'd, and continu'd afterwards, quite round the whole Building: For that authorifes, or, at least, excuses the Impropriety that might have been objected against the Architect, if he had, without apparent Necessity, done a thing, in it felf, contrary to Reason: namely, not to give each Story, which is, properly, a separate Building, its distinct and proper Order, and to make one Column serve to carry two Floors, fuppoling that it carries one, as we may fay, upon its Head, and the other as hanging at its Girdle. For the Distance of the View, alone, cannot be a sufficient Reason to raise a Building, which, in a Theatre should oblige us to make the Stairs, Seats, Ballustrades and Rails, higher than usual, as Virruvius has remark'd.

The feventh Abuse is to constrain ones self to give a great Height to a Building in proportion to the Greatness of its Length, through a false Persuasion, that this pretended Proportion ought to be the principal Rule, though 'tis contrary to a Maxim of Vitruvius, which is, without comparison, more important: namely, that the Dimensions of Buildings ought to be regulated by the Conveniency their use requires. For what can be more unreasonable, when, in a great Court, we are oblig'd to give Buildings a great Extent, than to make them twice the Height that is necessary, by augmenting the Number and Height of the Stories, which are thereby made inconvenient, without giving them any Beauty, fince Beauty is not to be found in those Things where the Proportion produces a visible Inconvenience? It must, then, be confess'd, that great and large Buildings do not require a great Height, but when they are capable of it, and feem to demand it, as Temples, Theatres, and other Buildings of that kind. For though it is true that lofty Heights contribute much to the Majesty and Beauty of Architecture, it depends upon the Prudence of the Architect, to find out, and choose rational Pretences for giving these Heights to such Buildings, as, in themselves, do not require them, such as are those design'd for Habitation; and for this Purpose, he must find Means to raise fome large Vestibule, or great Chapel, which appearing above the Apartments, gives Height to the Building, in those Parts, where it is most proper. And this is what has been very well perform'd in the Escurial, which, being compos'd of several Buildings, of a great Extent, and which have but a moderate Height, being proportion'd to Uses which did not require a great one, has, in the middle, a large and high Chapel; which rifes like a Head upon the Shoulders of this great Body. For it can't be faid this great Body of the Escurial, confisting of a Convent and a Palace, may not serve for Palaces alone: Since 'tis no ways inconvenient to make, in great Palaces, Chappels thus lofty, distinct and separate, from the Apartments; This having been practis'd in all times, with good Reafon and Agreeableness, in ancient Castles, where the Chapel was never in a Chamber, or a Hall, as we have lately made them, but apart by it felf, with its proper Form of a Chapel. In gains build a

THE eighth Abuse is that which I spoke of in the second Chapter of the seventh Part, treating of the Doric Order: It consists in this; that some of the Moderns, contrary to the usual Practice of the Ancients, join the Plinth of the Base of the Column, to the Extremity of the Cornice of the Pedestal, with a Sweep, which, in CH. VIII. Effect, suppresses this essential part of the Base, and makes it seem rather a part of the Cornice of the Pedestal, than a part of the Base of the Column.

The ninth Abuse, which has some Agreement with the first, which consists in the Penetration of two Columns, or of two Pilasters, is the making what we call an Architrav'd Cornice, by confounding the Architrave and Freeze with the Cornice. This is done when there is not room enough for a compleat Entablature: The Abuse consists in this, that we would have that pass for an Order, which is not so; for 'twere better not to make it an Order, but take away the Columns and Pilasters: Or, if this Entablature, which we are obliged to make low, through want of room, must have a Projecture that requires something Insulate and Detach'd to bear it; we should then put Caryatides, Thermes, or very large Consoles, or Corbles, and not Columns; which, in the regularity we are now speaking of, always require a Crowning compos'd of all the three parts distinct, each from other; namely,

Architrave, Freeze, and Cornice.

THE tenth Abuse, is the breaking off the Entablature of an Order, and making the Cornice of a Pediment rife from the top of a Column, or a Pilaster, or plain Peer, directly over which the Entablature is discontinued, to descend again upon the other side, where the Entablature is renew'd, without having either Architrave, Freeze or Cornice, running a-cross underneath. This Pra-Etice is quite contrary to the Principles of Architecture; which, according to the Precepts of Vitruvius, and the Practice of all good Masters, in what belongs to Entablatures and Pediments, is govern'd by the imitation of the Works of Carpentry, supposing a Pediment to be like the Truss of a Roof, confisting of three Parts: Namely, of the two principal Rafters, which are reprefented by the two Cornices of the Pediment, that rife, meet and rest, one against the other; and of one Beam represented by the Entablature that runs underneath: for as a Truss cannot subfift if we take away one of these three parts, so a Pediment ought likewife to be effeemed defective, if any of them are wanting: And if Palladio had reason to blame the cutting away the upper part, or top of the Pediment, because it takes away, from the principal Rafters, which this mutilated part represents their principle use, by hindering the leaning of their upper ends one against the other; there is no less reason to find fault with those Architects, who break off the Entablature that should run under the Pediment, because they take away that which represents the Beam that should keep the lower ends of the Rafters firm, and prevent their spreading or flying out. THERE

THERE are, besides, some other Abuses, of less Importance, as the making Imposts to profile against Columns; giving them more Projecture than the Pilasters have, against which their Profiles come, as is done in S. Peter's at Rome; the making the Cornice of one Story, serve for the Rail, or Parapet, to a Terrass, or to the Windows of another Story, above; the continuing the Window-stool to make a Facia round the Building; the breaking, or returning, the Mouldings on the Corners of Doorcases, and Window-jambs, with a Knee (as our Workmen term it) as Scamozzi has done, in a very disagreeable Manner; the making, at the Sides of Doors, and Windows, under the Cornices, that cover them, Corbels which do not support these Cornices, the true Manner being to make the Bedmoulding, or those Mouldings, under the Corona, advance, and make a Projecture over the Scroul or Corbel: for this Abuse is no less to be condemn'd, than that of the Cartoozes, which Palladio so much blames; there not being more Reason to find Fault with the use of Cartoozes to bear any thing, because they are not capable of doing it, than there is that Corbels, which are defign'd to support, should carry nothing.

PALLADIO has defign'd Scrolls, or Bragets, in the Temple of Manly Fortune, and in that of Nismes, call'd the Square-bouse, which immediately support the Corona. But the Manner we make them in at present, has something more elegant than is in those of the Antique, whose Proportions, Vitruvius has given us, which are the fame with those in the Temple of Manly Fortune: for these Corbels of the Antique, are strait and flat, not having the spiral Circumvolutions of their Volutes, prominent, like those of the Antique Composite Capitals, as they are now-a-days made. There are of these Corbels, according to the Antique, in the noble Portico, which that excellent Architect, Mr. Mercier, has built to the Church of the Sorbon, on the Side of the Court, which have no good Ef-And this confirms what was faid in the Beginning of this Chapter; namely, that there are Things, in Architecture, which may be call'd abusive, because they are not conformable to the Rules of the Ancients, but, however, are very good, and may, without Scruple, be put in Practice.

I find, also, an Instance of this, in the Roses that are put between the Modillions, in the Sossite of the Corona, of the Corinthian Cornice. These Roses are usually of a different Manner, in the Antique: but, I think, they are not to be blam'd, who take the Liberty to make them all alike, after the Example of those in the Baths of Diocletian. The Reason is, because there ought to be a K k

CH. VIII. Distinction made between those Things, which, in Sculpture and Painting, are represented as Ornaments, and those that are reprefented Historically, as containing Truths and Matter of Fact. For the former ought to be repeated, and renew'd, always in the same manner, and the latter ought to be diversified. For Example, if we represent the Border of a Flower-garden, it may be adorn'd with leveral Sorts of Flowers, in different Dispositions, because the thing is really fo in Fact: But if we would adorn any Member of Architecture, with Foliage, or Flowers, we should not only repeat the same Foliage, and the same Flowers, but they ought, likewise, to be of the same Bigness, and have the same Disposition; this Repetition of the same Thing, making a part of that Symmetry, in which, one of the principal Beauties of Architecture, and Sculpture, confifts, as to the point of Ornaments. And it fignifies nothing to lay that the Roles we speak of are Ornaments of another Kind, than those which are continued through the Length of a Square, an Ogee, or a Cimaile; and that these Roses being separated each from other, 'tis sufficient, for the Symmetry, that they are all of the same Bigness: For there is no more Reason to make these Roses different, than there is to make the Modillions so, which, tho' they are all of the same Bigness, would not be endur'd, if they were made of different Figures, there being no Person, that, in a Row of Modillions, would like some should be cut with Oliveleaves, others with Leaves of Acanthus, others with Eagles, others with Dolphins inflead of Leaves, as we find them in different Buildings of the Antique.

I had bridger and of the

Although, among the Reflexions made in this Chapter, upon the Abuses in Architecture, lately introduc'd, there are some that do not very particularly belong to the Subject of this Treatise, of the Ordonance of Columns; I thought, nevertheless, they ought not to be left out, because they appear'd, to me, so considerable that I could not let slip the Opportunity of speaking of them, the something out of the Way, in Hopes that this Freedom, I take, will be consider'd as one of those Abuses, which, though contrary to Rules, are, however, authoris'd, because they are considerably useful on some Occasions.

To conclude this Treatife, I shall repeat the Protestation I formerly made in the Preface: namely, that I have no Design the Paradoxes, I have advanc'd, should be look'd upon as Opinions that I am obstinately resolv'd to maintain, being ready to renounce them, when I shall be better inform'd of the Truth, supposing that I may be now in the wrong. But, above all, as to those Things I call Abuses, Abuses, I declare that all the Reasons I have us'd to condemn them as such, do not appear, to me, strong enough to make me think them preferable to the Authority of those great Persons, who have approv'd and establish'd them; I only thought, that the Veneration, and Respect, I have for them, ought not to hinder my treating these Questions as Problems, upon which, I could heartily wish to have the Decisions of the Learned, who would give their Judgment honestly, without Partiality or Prejudice.

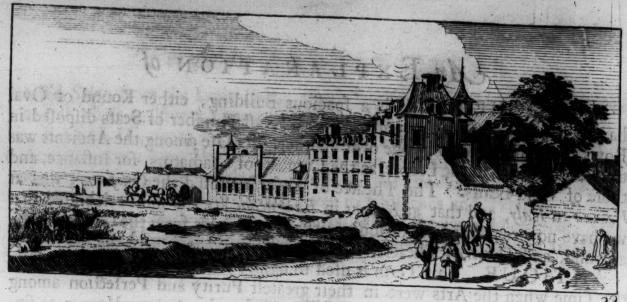


Part. II. fee Kinds of Columns.

IST.

Abuses, I declare that all the Reasons I have used to condemn them is as such, do not appear, to me, strong enough to make me think them preferable to the Authors of those great Persons, who have approved and established them the strongers, that the Veneration, and Respect, I have for the spire not to hinder my treating these Questions as Problems, upon which I could heartily wish to have the Decisions of the Learned, who would give their Judgment homestly, without Patriality or Prejudice.

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AN

EXPLANATION

OF

Such Terms in ARCHITECTURE as occur in the preceding TREATISE.

A.



BACUS, comes from the Greek word Abax, and has feveral Meanings: Sometimes it fignifies an Alphabet; fometimes a Table of Numbers, anciently call'd Pythagoras's Table; fometimes a Square Trencher, and fometimes a Buffet or Side-Board, call'd Credenza by the Italians. In Architecture it fignifies a quadrangular Piece, which ferves as a Crowning to the Capitals of Columns; and in those of the Corinthian Order represents a kind of Square Tile covering a Basket, supposed to be encompas'd with Leaves.

ACANTHUS, is the Herb Branca Ursina, or Bears-foot; whose Leaves are represented in the Capital of the Corinthian Column, and are said to have been the first Occasion of this Ornament; which was invented by Callimachus, an ingenious Statuary of Athens, upon seeing this Plant spreading it self around a Basket that had been placed upon the Tomb of a young Corinthian Lady, and covered up with a Tile. The Leaves he imitated in his Scrolls or Volutes, the Basket in the Vase or Tambour, and the Tile or Covering in the Abacus. There are two Kinds of Acanthus, the one Wild, and Arm'd with Prickles; the other smooth, and cultivated in Gardens; the former of which we find represented in Gothic Buildings, and the latter in those of the Antique.

ACROTERIONS, are little *Pedestals*, usually without *Bases* placed at the two Extremes, and on the Middle of *Pediments*. The word is Originally Greek, and signifies the Extremity of any Thing; as for Instance, the Tip of a

Finger, a Rock, or the like.

ALCOVE, comes from the Spanish Alcoba, which is derived from the Arabic Elkauf, a place to Sleep in. Accordingly in our Bed-chambers it signifies that particular Place in which the Bed stands, and which is usually separated from the rest by Pilasters, or other Decorations forming an agreeable Place of Retirement.

AMPHI

AMPHITHEATRE, is a spacious Building, either Round or Oval having its Arena, or Pit, encompass'd with a vast Number of Seats disposed in Rows, and rising gradually one over another. Its Use among the Ancients was to exhibit Shews to the People, as the Combats of Gladiators, for Instance, and those of Wild-Beasts. The Theatre of Vespasian call'd the Coliseum; that at Verona in Italy, and that at Nismes in Languedoc are the most celebrated that we have now remaining of Antiquity: the Word comes from the Greek Amphi, a-round, and Theatron Theatre.

ANTIQUE. This Term is used to signify a Building or Statue made at the Time when the Arts were in their greatest Purity and Perfection among the Ancient Greeks and Romans. We likewise say, the Antique Manner, to signify any thing done according to the strict Rules, and the good Tast of the

Ancients.

AQUEDUCT, comes from the Latin Aquadudus, a Conduit of Water, and fignifies an artificial Canal, either running under Ground, or rais'd above it, and ferving to convey Water from one Place to another, according to their Level, notwithstanding the Unevenness of the intermediate Ground. The Romans built several very considerable Ones in their City; and Julius Frontinus, who had the Direction of them, tells us of Nine which discharged themselves through 1314 Pipes of an Inch Diameter; and Blaiseus upon Livy observes, that these Aquedusts brought into Rome above Five hundred thousand Hogsheads of Water, in the Space of 24 Hours.

ARCHITRAVE, is the Principal Beam, or Poitrail, and the first Member of the Entablement, being that which bears upon the Column, and is made sometimes of a single Summer, as appears in most of the ancient Buildings, and sometimes of several Haunses, as we usually see it in the Works of the Moderns: the Word comes from the Greek Archos, chief; and the Latin Trabs, a Beam; 'tis also sometimes call'd Epistyle from the Greek Epi upon, and Stylos

a Column.

ARÆOSTYLE. From the Greek Araios rare, and Stylos a Column. This word Vitruvius uses to signify the greatest Interval or Distance which can be made between the Columns; consisting of eight Modules, or four Diameters.

ASTRAGAL, from the Greek Astragalos, the Bone of the Heel, is a little round Moulding, which encompasses the Top of the Fust, or Shaft of a Column.

ATTICK. See under, Order.

B.

BALLUSTRADE, is the Continuity of one or more Rows of Balluflers made of Marble, Iron, Wood or Stone, ferving either for an Elbowrest, as in Windows, Balconies and Terrasses, or as a Fence to keep off Things from without. And thus we see 'em around some Altars, Fonts, &c.

BALLUSTER, is a little Column or Pillaster, either round or square, adorn'd with Mouldings, and serving to form a Rest or Support to the Arm, and in some measure to answer the Ends of a Balcony. The Word comes from the Latin Balaustrum, which it self is borrow'd from the Greek Balaustion, the Flower of the Wild Pomegranate, which it very much resembles.

BAND, in Architecture, is any flat Member that is broad, and not very deep; and the Word Face from the Latin Fascia, is sometimes us'd to signify

the fame thing.

BASE, from the Greek Basis, a Rest or Support. This Word is used to signify any Body, which bears up another, but is particularly applied to the Bottoms of Columns and Pedestals. The Base of a Column is also sometimes call'd



call'd Spire, from the Latin Spire, which signifies the Fold of a Serpent laid

at rest, these making a Figure not unlike that.

BASILIC, from the Greek Basilike, a Royal Palace. This among the Ancients was a large Hall with Portico's, Isles, Tribunes and Tribunal, where the Kings themselves administer'd Justice: but the Name is somewhat differently applied now-a-days; being given to Churches and Temples, as also to certain spacious Halls in Princes Courts, where the People hold their Assemblies and the Merchants meet and converse together; as that for Instance of the Palace at Paris, beliege of revowed solars) brow soll inher that evenue any Body; and thus we lay the Cornire of a

CARTOUCHE, an Ornament of Carv'd Work, of no determinate Form, whose Use is to receive a Motto, or Inscription, the Word being borrow'd from the Italian Cartoccio, which fignifies the same thing.

CARYATIDES, from the Greek Kariatydes, a People of Caria. By these are meant certain Figures of Captive Women dress'd after the manner of that Nation, and ferving instead of Columns to support the Entablements.

CAVETTO, from the Latin Cavus, a Hollow, fignifies a round Concave Moulding, which has a quite contrary Effect to the Quarter-round; the Workmen call it Mouth, when in its natural Situation and Throat, when it is turn'd uplide-down.

CINCTURE, is a Lift or Fillet at the Top or Bottom of a Column.

That at the Top is fometimes call'd Colier, and fometimes Annulus.

CAPITAL, is the upper Part of a Column. Such of these as have no Ornaments, as the Tuscan and Doric, we call Capitals with Mouldings; and the rest which have Leaves, and other Ornaments, Capitals, with Soulptures. The Word is borrow'd from the Latin Capitellum, the Head or Top of any

thing.

CIMA, or Cymaise, from the Greek Kymation, a Wave, is what in English we usually call Oges, Ogive, and fometimes barely O. G. By which we mean a Moulding waved on its Contour, Concave at the Top, and Convex at the Bottom, and which makes the uppermost Member, and as it were the Cime or Top of large Cornices. Of these there are two Kinds; in the one, that Part which has the greatest Projecture is Concave, and is term'd Doucine, or an Upright Ogee; in the other, the Convex Part has the greatest Projecture; and this is call'd the Heel, or Inverted Ogee. Some write the Word Simaife, and derive it from Simus, flat Nofed: but that Etymology is false, the Beauty of this Member confifting in having its Projecture equal to its Height.

COLUMN, is a kind of round Pillar, composed of a Base, a Fust or Shaft and a Capital, and ferves to support the Entablement. The Column is different in the different Orders, being capable of a great Number of Variations, with regard to its Matter, its Construction, Form, Disposition and Use. The Word comes from the Latin Columna, which Vitruvius tells us was

form'd from Columen, a Prop or Support.

COLOSSUS. This Term is applied to any Figure that is twice as big as the Life; as, the Colossus of the Sun at Rhodes, and those of the Emperors Nero and Commodus; some Remains of which are still to be seen in the Court of the Capital at Rome. We likewife call a Building a Colossus, when it is of an extraordinary Bigness, as the ancient Amphitheatres, the Pyramids of Egypt, &c. The Word comes from the Greek Koloffos, which is compounded of Kolos, Great, and Ossos Eye, as being large to the Eye. COMPOSITE, see under Order.

CONSOLE, from the French Consolider, to close up, is an Ornament cut upon the Key of an Arch, which has a Projecture or Jetting, and on occasion serves to support little Corniches, Figures, Busts and Vases. Vitruvius calls the Consoles, Ancones.

CONTOUR, is the Outline (as we fometimes call it) of a Figure, or that

which bounds and defines it.

CORNICE, comes from the Latin Coronis, a Crowning, and makes the Third and Uppermost Member of the Entablement, which is different in the several Orders. The Word Cornice, however, is applied to every Prominent or jetting Member that crowns any Body; and thus we say the Cornice of a Pedestal, and the like.

CORONA, Coronis, or Crowning. These Words are indifferently applied to any thing that finishes an Ornament in Architecture; as for Instance

to a Cornice or Pediment, &c.

CORBELLE, or Corbel, in Latin Corbis, is a Piece of Carv'd Work in the Form of a Basket full of Flowers or Fruits, ferving in Architecture to finish some Ornament; an Instance of which is seen in the Pillars which encompass the Orangerie at Versailles.

D.

DENTICLES, are Ornaments in a Cornice, cut after the manner of Teeth.

These are particularly affected in the Doric Order; and the square Member whereon they are cut is call'd the Denticule, in Latin Denticulus.

DIASTYLE, from the Greek Dia between, and Stylos Column, is used by Vitruvius to signify a Space between two Columns, consisting of three Diameters or six Modules.

DORIC, fee under Order.

DIE. This Term is applied to any square Body, as the Trunk or Naked of a Pedestal, which is that Part included betwixt the Base and the Cornice.

DIPTERE, comes from the Greek Dipteros, having two Wings, and among the Ancients, was understood of a kind of Temple encompased round, with a Double Row of Columns. The Pfeudo or false Diptere, was the same; excepting that instead of the Double Row of Columns, this was only encompassed with a single One.

E.

E CHINUS, comes from the Greek Echinos, the Shell of a Chesnut; and is sometimes used to signify the Quarter-Round, but more commonly that Part of it which includes the Coum or Egg.

EGG, see Quarter-Round.

ENTABLATURE, fee Entablament.

ENTABLEMENT. By Vitruvius and Vignola is call'd Ornament, and fignifies the Architrave, the Freeze and the Cornice together. It is likewise call'd Trabeation, and is different in the different Orders. The Word seems borrow'd from the Latin Tabulatum, a Ceiling, because we suppose the Freeze to be form'd by the Ends of the Joysts which bear upon the Architrave.

EUSTYLE, is the best Manner of placing Columns with regard to their Distance, which *Vitruvius* maintains to be of two Diameters and a quarter, or four Modules and an half. The Word is compounded of the Greek *Eus* well,

and Stylos Column.

ENTRESOLE, fometimes called Mezanine, is a kind of Little Story, contrived occasionally at the Top of the first Story, for the Conveniency of a Ward-robe, &c.

F. F A-

ACADE, is the Face or Front which any Confiderable Building prefents towards a Street; Court or Gardence, and and Street; Streets or Gardence

FACIA, or Fascia, fignifies any flat Member, as the Bundrof an Architrave, &c, There are some who write it Fasce, grounded upon the Liatin Word Fascia, a large Turban, which Vitrivius makes use of on the like Ocwhich in the Doric Order is regulated according to the Distribution of nortes

TESTOON, an Ornament of Carv'd Work in the Manner of a Wreath, or Garland of Flowers or Leaves twifted together, thickest at the Middle, and fuspended by the two Extremes, whence it hangs down perpendicularly. Some of these are contrived with a View to Musick; others to Hunting, Fishing, &c. each representing the Attributes and Instruments peculiar to its respective Art. The Word Festoon may probably be derived from Festus, as being usually employ'd on Festival Occasions. Vitruvius calls the Festoons Encarpi, from the Greek Enkarpos, fruitful of lower of the

FILLET, is any little square Moulding which accompanies or crowns a ST. from the Italian Liftelo, a Girdle, is a little found Morngral.

FLUTEINGS, by the French call'd Cannelunes, are certain Perpendicular Cavities cut length-wife a-round the Shaft of the Column, and rounded at the two Extremes. Their Number was at first limited to 24 in the Ionic, and 20 in the Doric Order; but that Limitation, some of our Modern Architects have taken the Liberty to dispense with. These Cavities are frequently fill'd up with fomething not unlike a Flute, whence 'tis probable they take their Names: as the French Term Cannelures feem borrow'd from the Cavities themselves which refemble Canals. They are fometimes also call'd Strives from Striges, the Folds of a Garment, which Vitruvius tells us they were at first intended Word comes from the Greek Metape, which is form a of A. tnelegge of

FREEZE, a large flat Member, which separates the Architrave from the Cornice. The Word comes from the Latin Phrygio an Embroiderer, the Freezes being frequently adorned with Figures in Bas-Relief, somewhat in Imitation of Embroidery. The Freeze is fometimes also express'd by the Word Zophoros, from the Greek Zoophoros, it being usual for Animals to be represented up-

FRONTISPIECE, see Portail.

FUST, from the Latin Fustis, a Club, fignifies the Trunk or Shaft of a Column, being that Part comprehended between the Base and the Capital. Vitruvius calls it Scapus.

G.

OTHICK, or Modern Architecture, is that which is far removed from the Manner and Proportions of the Antique, having its Ornaments Wild and Chimerical, and its Profiles incorrect: However, it is oftentimes found very strong, and appears very rich and pompous, as, particularly in feveral of our English Cathedrals. This Manner of Building came Originally from the North. whence it was brought by the Goths into Germany, and has lince been introduced into other Countries.

[ELIX, or Urilla, is a little Volute, Caulicole, or Stalk under the Flower of the Corintbian Capital. The Word is borrowed from the Greek Elix, a kind of Ivy, whose Stalk is twisted like the Vine.

HIPPODROME, among the Ancients, was a long Place, circular at the two Extremes, and encompass'd with Portico's, wherein they were used to Exercise their Horses intended for the Course.

CONSOLE, from the French Compiler to dole up, is an Ornament upon the Key of an Arch, which has Projecture by Jelishe, and on ex-

IMPOSIT, from the Italian Imposed surcharged, is a Plinth or little Cornice, that crowns a Piedroit, or Peer, and Supports the Confinet, which is the first Stone, whence a Vault or Arch commences.

c. There are lome, who write it sysbro rebna selpal MOIsin

which in the Doric Order is regulated according to the Distribution of Ornaments in the Freeze; but in the other Orders, according to Vitruvius, is of five different Kinds, with Picnostyle, Sistyle, Eustyle, Diastyle and Araostyle. This the Lestins express by the Word Intercolumnium.

Fouring, Fishing, &c. each reprefeating the Attributes and infruments peer-

LEAVES, are Ornaments of Carv'd Work, and are either Natural, as those of the Lawrel, Olive, Palm, &c. or Imaginary, such as are frequently

feen in the Foliages of the Antique. wold stand shill you at . 13

LIST, from the Italian Listello, a Girdle, is a little square Moulding, ferving to crown or accompany a larger, or on occasion to separate the Fluteings of a Column. It is sometimes call'd Fillet, and sometimes Square.

e the Darie Order: but that I might M (one of our Modern Architects have

METOPS, is the square Space between the Triglyphs of the Doric Freeze, which among the Ancients used to be adorned with the Heads of Beasts, Basons, Vases, and other Instruments used in Sacrificing. A Demi-Metops is a Space somewhat less than half a Metops, at the Corner of the Doric Freeze. The Word comes from the Greek Metope, which is form'd of Meta and Ope, that is to say, between three.

MINUTE, is fometimes taken for part of a Module, at other times for

the twelfth Part of an Ounce.

MODERN. This Word which signifies something New, is very improperly apply'd to the Italian Manner of Building, that being according to the Rules of the Antique: Nor is the Term less abused when attributed to Architecture purely Gothick. The Word Modern then, in its genuine Meaning, is only applicable to such Architecture as partakes partly of the Gothic, retaining somewhat of its Delicacy and Solidity; and partly of the Antique, whence it borrows Members and Ornaments without any Proportion or Judgment.

MODILLIONS, from the Italian Modiglioni, are little inverted Confoles, under the Soffit, or Bottom of the Drip, in the Ionic Composite, and Corinthian Cornices, and ought to correspond to the Middle of the Columns. These are particularly affected in the Corinthian Order, where they are always enrich'd with Carv'd Works. In the Ionic and Composite they are more simple, having seldom any Ornaments, excepting sometimes a single Leaf under-

neath; in Latin they are call'd Mutuli.

MODULE, comes from the Latin Modulus, a little Measure; by which in Architecture, we mean any Bigness or Extent taken at pleasure, to measure the Parts of a Building by, and is usually determined by the Lower Diameter of Columns and Pilasters. Vignola's Module, which is equal to the Semi-Diameter of the Column, is divided into Twelve Parts in the Tuscan and Doric, and into Eighteen in the rest of the Orders. The Module of Palladio, Scammozzi, Mr. de Cambray and M. Desgodetz, which is likewise equal to the Semi-Diameter, is divided into Thirty Parts. This is what M. Perrault thinks Vitruvius intended by the Word Embates.

s intended for the Conrie.

MOULD-

MOULDINGS. Under this Name are comprehended all those Jettings or Projectures beyond the Naked of a Wall, a Column, &c. which only serve for Ornament; whether they be Square, Round, Streight or Crooked. Of these there are seven Kinds more considerable than the rest, viz. the Douoine, the Taton or Heel, the Ovola or Quarter-round, the Plinth, the Astragal, the Denticle, and the Cavetto.

Greek Peri about, and Pteron winged. A. Save-Breaff, is a little Wall; or

NAKED, of a Wall, Column, or the like, is the bare Surface of a Wall, or Column, which ferves as a Field or Ground to the Projectures.

Foot for the Column to stand upons and having according to Figureia, the third Part of the Height of its Column. It is different in different Orders,

OBELISK, is a kind of Quadrangular Pyramid, very tall and slender, rais'd in a publick Place, to show the Largeness of some enormous Stone, or to serve as a Monument of some Memorable Transaction; the Word is borrow'd from the Greek Obelos, a Spit; there being some Resemblance between this kind of Pillar, and the Spits used by the Pagan Priests in Roasting their Sacrifices.

OGEE, see Cima.

ORDONNANCE, fignifies the same Thing in Architecture that it does in Painting; to wit, the Composition of a Building, and the Disposition of all its Parts; it being this that determines the Bigness of the several Members, whereof a Building is composed.

ORDER, is a particular Arrangement of Projectures; or as Mr. Perrault defines the Word, 'tis a Certain Rule for the Proportions of Columns, and for the Figures which some of the Parts ought to have on account of the Proportions that are given them.

The Tuscan Order is the first, the most Simple, and the strongest: Its Column has seven Diameters in height, and its Capital, Buse and Entablement, have no Ornaments, and but sew Mouldings.

The Doric Order is the second, and the most agreeable to Nature, having no Ornaments on its Base, nor its Capital. Its Column is eight Diameters high, and its Freeze is divided between Triglyphs and Metopes.

The Ionic Order is the third, and is a kind of mean Proportional between the Strong and the Delicate Orders. The Height of the Column is nine Diameters, its Capital is adorn'd with Volutes, and its Cornice with Denticules.

The Corinthian Order is the fourth, the richest and the most delicate, and was invented by an Architect of Athens. Its Capital is adorn'd with Rows of Leaves, and with eight Volutes which support the Abacus. The Height of its Column is ten Diameters, and its Cornice is supported by Modillions.

The Composite Order is the fifth, and is so call'd, because its Capital is composed of the two Rows of Leaves proper to the Corinthian, and the Volutes of the Ionic. This Order is sometimes called the Italick or Roman, as having been first invented by that People. Its Column is ten Diameters in height, and there are always Denticles or simple Modillions to its Cornice. Besides the Five principal Orders, there are several less considerable ones, as,

The Attic, which is a little Order, confifting of Pilasters, with a Cornice Architraved for an Entablement; as that for Instance, in the Castle of Versailles, above the Ionic, on the side of the Garden. The Persian Order is that which has Figures of Persian Slaves to support the Entablement, instead of Columns; and the Caryatic has the Figures of Women serving for the same Purpose.

ORNAMENT, is any Piece of Carv'd Work, serving as a Decoration in Architecture: But the Word in Vitruvius and Vignola, is used to signify the Entablement.

Ovolo, see Quarter-round.

PERI

An Explanation of MOULDINGS. Under this Name are comprehended all those Fettings

or Projectures beyond the Naked of a Wall, a Column, &c. which only ferve for Ornament; whether they be Square, Round, Streight or Grooked. Of these DERIPTERE in the Ancient Architecture, is a Building encompas'd round with Columns; such as the Portico of Pompey, the Basilique of Antonine, the Septizon, or Mansoleum of Severus. The Word comes from the Greek Peri about, and Pteron winged.

PARAPET, from the Italian Parapetto, a Save-Breaft, is a little Wall, or fometimes a Rail serving either as a Rest for the Arm, or as an Inclosure about a Key, Bridge, Terrass, &c.

PEDESTAL, is a Square Body, with a Base and Cornice, serving as a Foot for the Column to stand upon; and having according to Vignola, the third Part of the Height of its Column. It is different in different Orders, and is sometimes called Stereobate or Stylobate, from the Greek Stylobates,

Base of a Column.

PILASTER, is a kind of Square Column, fometimes standing free, and detach'd from the Wall, but more usually contiguous to it, or let within it, fo as it does not shew above one fourth or fifth Part of its Thickness. The Pilafer is different in the leveral Orders, and borrows occasionally the Name of each; having the fame Ornaments and the fame Proportions with the Columns. The Word Anta in Vitruvius is to be understood of Pilasters, adjoyning to the Wall, and Parastata of those which stand alone, and which the French call Ifolees.

PILLAR, is a kind of Round Column disengaged from any Wall, and made without any Proportion; being always either too massive or too slender: Such are the Pillars which support the Vaults of Gothic Buildings. In Latin

they are call'd Pila.

PYRAMID, is a Solid Body, whose Base is either Square, Triangular, or Poligonous, and which from that Base diminishes continually to its Vertex or Top. These were sometimes rais'd to perpetuate some Signal Event: But being in some respect Symbols of Immortality, they more often serve as Funeral Monuments; as that for Instance of Cestius at Rome, and those in Egypt, not less remarkable for their Bigness than their Antiquity. The Word is derived from the Greek Pyr, Fire or Flame, this being pointed like a Pyramid.

PLAT-BAND, is a Square Moulding, having less Projecture than Height. Such are the Faces of an Architrave, and the Plat-band of the Modillions of a Cornice: The Plat-band in Vitruvius is signified by the Words Fascia, Tania

and Corfa.

PLINTH, from the Greek Plinthos a Square Brick, is a Square Piece, or Table, under the Mouldings of the Bases of Columns, and Pedestals.

PORTAIL, in Architecture fignifies the Decoration of the Face or Front of a Church, call'd also Frontispiece. There are some Gothic, as that of Westminfter-Abby, &c. and others Antique, as in many of the newest Churches. The Word Portail, upon other Occasions, does likewise signify the principal Gate of a Pa-

lace, Caftle, Pleasure-house, and the like.

PORTICO, is a kind of Gallery rais'd upon Arches, where People walk under Shelter. It has fometimes a Soffit, or Ceiling, but is more commonly Vaulted. Though the Word *Portico* be derived from that of Port or Gate, yet do we call the whole Disposition of the Columns in the Gallery, by this Name. The most Celebrated Portico's of Antiquity were those of the Temple of Solomon, that of Athens built for the People to divert themselves in, and where the Philosophers held their Conversation, that which occasion'd the Disciples of Zeno to be called Stoicks, from the Greek Stoa a Portico, that Magnificent one of Pompey at Rome, and that of St. Peter's Place in the Vatican.

PROFILE, is the Contour, or Out-line of any Member in Architecture,

as that of a Base, a Cornice, or the like.

PROJECTURE, fignifies the Prominency or Embossment which the Mouldings, and other Members of Architecture, have, beyond the Naked of the Wall; and is always in proportion to its Height. The Word is sometimes also applied to Galleries, Balconies, &c. which jett beyond the Face of the Wall.

PROPORTION, is the Justness of Members in each Part of a Building, and the Relation they bear to the whole; as for Instance, that which a Column bears to the Ordonnance of the entire Building. The Word is also used to signify the different Bigness which the Members of Architecture, and the Figures ought to have, with regard to the different Distances from which they are to be view'd.

PEDIMENT, in French Fronton, from the Latin Frons, a Forehead, is an Ornament that crowns the Ordonnances, finishes the Fronts of Buildings, and serves as a Decoration over Gates, Windows, Niches, &c. It is ordinarily of a Triangular Form, but sometimes makes an Arch of a Circle. Vitruvius calls it Fastigium.

PEER, or Piedroitis, a kind of square Pillar, part whereof is hid within the Wall; The only thing wherein it differs from a Pilaster, being this, that

the latter has a Base and Capital, which the former wants.

PSEUDO-DIPTIRE, see Diptere.

PYCNOSTYLE. This Term is used when the Columns are ranged so close to one another, that the *Intercolumnation* does not exceed a Diameter and an half, or three Modules.

Q.

QUARTER-ROUND. By this Name the Workmen call any Moulding, whose Contour is a Circle, or approaching to a Circle; using this Term where-ever the Architects use that of Egg, or Ovolo. See Echinus.

R.

ROSE, is an Ornament cut in the Spaces which are between the Modillions under the Plat-fonds of Cornices, and in the Middle of each Face of

the Abacus, in the Corintbian and Composite Capitals.

ROTONDO, is a Vulgar Term, fignifying any Building that is round both within and without-fide. The most Celebrated Rotondo of all Antiquity is that at Rome, dedicated to Cybele and the rest of the Gods by Agrippa: In Imitation of which the Chappel in the Escurial, where the Kings of Spain are Interr'd, is built round, and call'd Rotondo.

RUSTIC. A Manner of Building, rather in Imitation of Nature, than according to the Rules of Art.

REUL, see Parapet.

S.

SCOTIA, from the Greek Skotos, Darkness; signifies a Hollow, Obscure Moulding between the Tores of the Base of a Column. It is also call'd, by some, the Concave Member, and by others Trochilus, from the Greek Tro-

chilos, a Pulley which it refembles, as to Form.

SYMMETRY, comes from the Greek Symmetria, with Measure, and fignifies the Relation of Parity, both as to Height, Depth and Breadth which the Parts have, in order to form a Beautiful Whole. In Architecture we have both Uniform Symmetry, and Respective Symmetry; in the Former, the Ordonnance is pursued in the same Manner throughout the whole Extent; whereas in the Latter, only the Opposite Sides correspond to each other.

SOCLE, or Zocle, is a Square Body, less in Height than Breadth, and placed under the Bases of the Pedestals of Statues, and Vases, &c. the Word seems derived from the Italian Zoccolo, or the Latin Soccus, signifying the

Buskin wore by the ancient Actors.

SALON, is a kind of Hall, in the Middle of a House, or at the Head of a Gallery, or a large Apartment, which ought to have a Simmetry on all its Sides; and as its Height usually takes in two Stories with two Rows of Windows, the Bottom of its Plat-fond out to be Arch'd; as is practic'd in some of

the Palaces in Italy.

SOFFIT, from the Italian Soffito. This Term fignifies the Ceiling or Wainfoot of any Apartment form'd by Cross Beams, or flying Cornices, and having the Square Pannels of its Compartments enrich'd with Sculpture, Painting and Guilding, as we may observe in the Basiliques and Palaces of Italy. This is what the Latins mean by Lacunar, and Laquear, with this only Difference, that Lacunar signifies any Soffit, whose Pannels are call'd Lacus, Lakes, and Laquear is used to express that form'd by Compartments, intermingled with Plat-bands, in manner of a Noose, in Latin call'd Laqueus.

SOLIVE, from the Latin Solum a Floor, signifies a Joist, Rafter, or Piece of Wood either slit or sawed wherewith the Builders lay their Ceilings. These are made of different Thicknesses, according as their Lengths require; and their Distances from each other are usually equal to their Depths. In La-

tin we call them Tigna.

STATUE, is an Imbossed Figure, either in Stone, Marble or Metal, representing some Person distinguish'd by his Birth, his Merit, or by some Signal Exploit, standing free of any adjacent Building, and either serving as an Ornament of a Palace, or exposed in some publick Place to perpetuate the Memory of the Hero it is intended to represent. Of Statues there are four Kinds. The first is of those that are less than the Life; and of this Kind we have many Figures of Men, Kings, and even of Gods themselves. The second is of those that are just as big as the Life; and it was of this Kind that the Ancients, at the publick Expence, made the Statues of Men who had fignalized themselves by their Virtue, their Knowledge, or their Services to their Country. The third Kind exceeds the Life, and among thefe, such as were half as big again were appropriated to their Emperors, and those twice as big as the Life to Heroes. Lastly, The fourth Kind consists of such as exceed the Life three or four Times, or more: these are called Colossi, and were peculiarly fet apart for the Representation of Divinities; Tho' there have been Emperors and Kings who have had these Erected to themselves. Every Statue which resembles the Person it represents is call'd Statua Iconica. The Word Statue is likewife used to signify a Figure standing on its Feet; it being derived, either from Statura, the Size or Stature of a Man, or from stare to

SYSTILE, is that Manner of placing Columns where the Space between the two Fusts consists of two Diameters, or four Modules.

T.

THEATRE, among the Ancients, was a publick Building in form of a Semicircle, encompass'd with Portico's, and furnish'd with Seats of Stone, which included a Space call'd Orchestra, on the Front of which was the Proscenium or Pulpitum, that is to say, the Floor of the Theatre, with the Scene, which was a large Facade, adorned with the Orders of Architecture; and behind this was the Poscenium, or Place where the Actors made themselves ready. The Ancient Greeks and Romans had three Kinds of Moveable Scenes in their Theatres.

Theatres, which were painted in Perspective, and accommodated to the three different Kinds of Drama's, the Tragic, the Comic, and the Satyric. The Word in Latin is Theatrum, and comes from the Greek Theatron, Spectacle.

TORUS, a large round Moulding in the Bases of Columns; the Word comes from the Greek Toros, a Cable; to which it bears some Resemblance; or perhaps from the Latin, Torus, a Bed; The Figure of this Moulding being not unlike that of the Edge of a Quilt.

TRABEATION, see Entablement.

TRIGLIPH, is a Member of the Doric Freeze, placed directly over each Column, and at equal Distances in the Intercolumnation, having two entire Glyphes or Channels engraven in it, meeting in an Angle, and separated by three Sides, or Legs, from the two Demi-channels of the Sides. The Word comes from Triglyphos, which signifies three Engravings.

TRUNK, fignifies the Fust or Shaft of a Column, and the Die of a Pe-

destal; in Latin 'tis call'd Truncus.

TUSCAN, see Order.

V.

Door, or at the Entry of a House which they call'd Atrium Populatum and Vestibulum, being dedicated, as Martinius tells us, to the Goddess Vesta, whence he will have the Word derived, i. e. Vesta Stabulum, it being usual for People to stop here, before they went within Doors; and it being likewise the Custom to begin their publick Sacrifices with those offer'd to this Goddes: accordingly it was thro' the Vestible that they begun to enter the Houses. The Word may likewise be derived from the Latin Vestis, a Garment and Ambulare to walk; because the Vestible in the Modern Houses being an Open Place at the Bottom of a large Stair-Case, serving as a Thorough-fare to the several Parts of the House, 'tis here that the Robes are first let fall in Visits of Ceremony. Vestible is sometimes also used to signify a little kind of Anti-chamber before the Entrance of an Ordinary Apartment.

VOLUTE, from Volvo to fold, is one of the principal Ornaments of the Ionic and Composite Capital, representing a kind of Bark wreath'd or twisted into a Spiral Scroll. There are eight Angular Volutes in the Corinthian Capital, and these are accompanied with Eight other little ones, call'd Helices.

VAULT, is a Piece of Masonry, arch'd without-side, and supported in the Air by the Artful placing of the Stones which form it; its principal Use being for a Cover or Shelter. The chief Vaults in a Building are call'd Master-Vaults, to distinguish them from the other less considerable ones, which only serve to cover Gates, Windows, Passages, &c. Double Vaults are those which are built over another, to make the Beauty and Decoration of the Inside, consistent with that of the Outside, and leaves a Chasm or Vacancy between the Convexity of the One, and the Concavity of the Other; Instances of which we have in the Dome of St. Peter's at Rome, and in that of the Invalides at Paris.

URN, comes from the Latin Urna, a Vessel to draw Water in, and signifies a low wide Vase, serving as a Crowning over Ballustrades, and as an Attribute to Rivers, River-Gods, &c. in the Grotto's and Fountains in Gardens. A Funeral Urn is a kind of cover'd Vase enrich'd with Sculpture, and serving as the Crowning, or Finishing of a Tomb, a Column, Pyramid, or other Funeral Monument; made in Imitation of the Ancients, who deposited the Ashes of their Deceas'd Friends in this kind of Urns.

XYSTOS. Among the Ancient Greeks was a Portico of uncommon Length, either cover'd or open, wherein the Athleta used to Exercise themfelves in running Races, and Wrestling. The Word is derived from Xyein to polish, it being their Custom to anoint their Bodies with Oil before the Encounter, to prevent their Antagonists from fastening Hold of them. The Romans, too, had their Xyftus; which was a long Isle, or Portico, sometimes roof'd over, and at other Times open, and ranged on each Side with Rows of Trees, forming an agreeable Place for the People to walk in.

ZOCOLO, fee Socle: